Bio-behavioral surveillance survey among men who have sex with men in Tbilisi, Georgia

(2010)

Study report

Prepared by:

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Acronyms

AIDS	Acquired Immune Deficiency Syndrome
AI	Anal Intercourse
BSS	Behavioral Surveillance Survey
CIF	Curatio International Foundation
GFATM	The Global Fund to Fight AIDS, Tuberculosis and Malaria
GEL	Georgian Lari
HBV	Hepatitis B Virus
HBsAg	Hepatitis-B-Virus surface antigen
HCV	Hepatitis C Virus
HIV	Human Immunodeficiency Virus
HSV-2	Herpes Simplex Virus – type 2
IDP	Internally Displaced Person
IDU	Injecting Drug User
MSM	Men who have Sex with Men
MSMW	Men who have Sex with Men and Women
NGO	Non-Governmental Organization
RDS	Respondent Driven Sampling
RDSAT	Respondent Driven Sampling Analysis tool
RPR	Rapid Plasma Reagin
SHIP	STI/HIV Prevention
SPSS	Statistical Package for the Social Sciences
STI	Sexually Transmitted Infection
TPHA	Treponema Pallidum Hemagglutination Assay
VCT	Voluntary Counseling and Testing
USAID	United States Agency for International development
USD	United States Dollar
UNGASS	United Nations General Assembly Special Session
WHO	World Health Organization

Definitions

High-risk behavior – Any behavior that puts an individual or individuals at increased risk of contracting STIs/HIV or transmitting STIs/HIV to another individual (e.g., having multiple sex partners without using condoms consistently; sharing used non-sterile needles, syringes or other devices used to prepare the drug among IDUs).

Anonymous-linked testing – testing, where no names are taken but, results are linked to a number that only the participant knows.

Consistent Condom Use – use of condoms every time sexual relations occur, which includes vaginal, anal, or oral sex.

Regular (permanent) sex partner for MSM – A spouse or sex partner, with whom the relationship is stable.

Occasional (non-regular) sex partner for MSM – A sex partner, for a short period of time, who is not a spouse, a regular partner, or a sex worker.

Commercial sex partner for MSM – A sex partner with whom sexual contact is established in exchange for material remuneration, meaning that MSM paid money or gave some other material remuneration to the partner.

Client for MSM involved in commercial sex – A sex partner with whom sexual contact is established in exchange for material remuneration, meaning that MSM received money or some other material remuneration from the partner.

Executive Summary

Introduction

Georgia is among the countries with low HIV/AIDS prevalence but with a high potential for the development of a widespread epidemic. However, over the past several years while transmission through injecting drug use is still the prevailing route for HIV spread, the role of heterosexual transmission is increasing. According to the national HIV surveillance system, infections acquired through homosexual contact account for a small proportion of all HIV cases.

This study represents the subsequent wave of Bio-BSS undertaken among MSM in 2007, which was conducted using the RDS sampling technique and it managed to recruit 140 MSM in Tbilisi. The objective of the 2010 Bio-BSS in Tbilisi was to measure the prevalence of HIV and other STIs (Hepatitis B and C, Syphilis, Chlamydia, Herpes type-2 virus) among MSM, to provide measurements of key HIV risk behaviours and to generate evidence for advocacy and policy-making. The study was implemented within the GFATM funded HIV/AIDS surveillance system strengthening project by Curatio International Foundation (CIF), Association "Tanadgoma" and the Infectious Disease, AIDS and Clinical Immunology Research Center.

Methods

The study employed a cross-sectional design and a respondent-driven sampling methodology (RDS). The inclusion criteria for participation in the study included the following: 1) age 18 years or over, 2) homosexual anal or oral contact during the previous 12 months and 3) being a resident of Tbilisi.

The study protocol and questionnaires were approved by the Ethics Review Committee (certificate #518/619 of 20.08.2010). Recruitment started with seven seeds and a sample size of 278 respondents was reached . Face-to-face individual anonymous interviews were conducted by trained interviewers. The Biomarker component involved the analyses of blood specimens for HIV, Syphilis, Hepatitis B (HBV), Hepatitis C (HCV), Chlamydia and Herpes simplex virus type 2 (HSV-2).

The data was analyzed using Respondent Driven Sampling Analyses Tool version 6.0.1 to produce adjusted population-based estimates with 95% CI. Additional bivaraite analyses were carried out using SPSS.

Results

The median age of the participant MSM was 29 with the ages ranging from 18 to 71. The majority of respondents had secondary level education, had never been married and were representatives of the lower socio-economic tier of society (almost half of the interviewed MSM had no occupation and the monthly income of the majority did not exceed 500 GEL (280 US Dollars)).

The study did not show high percentages of alcohol use (especially its everyday use) or drug use. A small percentage (4.9%) reported injecting drugs during the last 12 months.

> *The survey findings are more representative of the lower socio-economic segment of this target group. Alcohol and drug use is not widespread in this group indicating that these two high risk groups – MSM and IDUs – hardly overlap.*

The survey participants had different types (regular, occasional and commercial) of both male and female sex partners. The median number of male partners (anal/oral partners) in the last 12 months was 4. Of those who had anal intercourse during the last 12 months, 61.7% reported using a condom during their last episode, compared to 42.6% of those who had oral sexual intercourse. Approximately the same proportion of MSM reported condom use at last anal contact with all types of partners. Only one third reported consistent condom use during anal sexual intercourse in the last 12 months.

Two thirds of the respondents reported having sexual relationships with females in the past year. Among those who had both male and female partners and inconsistently used condoms during anal sex with their male partners (68), only 11.7% always used a condom with their regular female partner.

About one third of MSM were ever involved in group sex and slightly more than half used a condom at last group sex.

More than half of MSM never used lubricants, the leading cause of which is a low awareness of its existence.

The majority of respondents knew where to obtain condoms and half of those knowledgeable about lubricants knew where to obtain them.

> *Risky sexual practices are quite widespread among MSM such as large numbesr of different types of partners, both male and female, low use of condoms, especially consistent use of male and female occasional and commercial partners, involvement in group sexual practices and in commercial sex. High risk practices with male partners among MSM with bisexual activity raise concerns about potential bridging role of MSM in HIV transmission to the general population.*

The majority are aware of STIs and their symptoms in men. Only one fifth of MSM reported taking a STI test during the last 12 months and about one third were tested prior to that.

Although HIV/AIDS awareness is high, not all MSM are aware of this disease (8.5%). Less than half of MSM knew where to get a confidential HIV test in their community. The majority were never tested on HIV at all and only 15.5% of the respondents were tested during the last 12 months. Only 9.9% assessed their personal risk regarding HIV infection as high.

Of the interviewed MSM, 7.4% reported that they had experienced violence because of sexual orientation or sexual behaviour in the last 12 months.

Coverage by preventive interventions, measured by the awareness of where to get a confidential HIV test and receipt of a condom during the last 12 months was low - only 20.9% of the MSM are covered by preventive programs.

> *Knowledge about STIs is quite high among MSM, but STI testing is very low. There is inadequate awareness of the availability of confidential HIV testing leading to an alarmingly low HIV testing practice. Coverage by preventive programs is very low among this high risk group.*

HIV infection among Tbilisi MSM has reached 6.4%. Syphilis (TPHA) was detected in 26.6% of MSM. Tested by two laboratory methods (TPHA and RPR), active syphilis was found in 12.9% of respondents. As for the other STIs, the prevalence of Herpes infection (HSV2) reached 32%, of Hepatitis B - 4.3% and Hepatitis C -17.3%.

> *HIV infection has reached the level of a concentrated epidemic among MSM in Tbilisi. This is coupled with a very low STI and HIV testing uptake, indicating that strategies to test more MSM are required.*

Recommendations

Based on the findings of this study the recommendations should focus on: 1) Increasing the coverage of this particular segment of MSM population by preventive interventions aimed at risk reduction; 2) Studying and reaching other segments of MSM (with a higher socio-economic background) through implementing different approaches and methods, such as internet-based interventions; 3) Focusing on reducing HIV-associated, as well as homosexuality-associated stigma and discrimination; 4) Investigating any interesting tendencies revealed through the survey, e.g.: factors underlining different patterns of condom use with female and male partners; injecting drug use patterns in this group, etc; 5) Conducting non-coercive, anonymous, ethical and systematic surveillance of MSM, of both behavioral and selected biological markers, in order to monitor the prevalence dynamics of HIV infection and other STIs.

Table 1: Summary of Core Indicators

Key indicators	RDS population estimates, % (95% CI)	n/N
Socio-demographic characteristics		
Median age (years)	29	
Education (Secondary)	53.2 (45.4-61.3)	145/278
Education (Higher / incomplete higher)	42.4 (34.4-49.6)	125/278
Georgian nationality	74.3 (65.6-81.7)	228/278
Marital status (never married)	59.5 (51.9-67.9)	171/278
Alcohol and drug use		
Drink alcohol every day	8.1 (4.8-12.4)	24/278
Drug used during last 12 month	21.1 (14.6-27.8)	60/278
Drug injected during last 12 month	4.9 (2.3-8.1)	12/278
Sexual behavior		
Median anal/oral partners in last 12 month	4	
Used condom at last anal intercourse (AI)	61.7 (54.2-70.7)	181/269
≤ 24	71.3 (61.9-84.3)	64/85
≥ 25	57.3 (48.8-68.7)	117/184
Used condom at last oral intercourse	42.6 (34.6-51.7)	90/186
Consistent condom use during AI in last 12 month	31.6 (24.2-39.4)	97/269
≤ 24	29.5 (18.2-40.9)	31/85
≥ 25	31.9 (22.9-41.7)	66/184
Had anal/oral regular male partner in last 12 months	60.4 (52.1-68.6)	191/278
Used condom at last AI with regular partner	60.2 (51.1-69.6)	117/187
≤ 24	71.4 (56.6-85.9)	46/67
≥ 25	54.6 (44-67)	71/120
Consistent condom use during AI in last 12 month with regular partners	35 (25.7-43.4)	73/187
≤ 24	33.1 (21.6-50.5)	25/67
≥ 25	35.5 (23.5-46.4)	48/120
Had occasional anal/oral male partner in last 12 months	76.6 (69.9-82.8)	211/278
Used condom at last AI with occasional partner	61.5 (52.9-70.8)	141/204
≤ 24	71.6 (58.2-86)	47/63
≥ 25	57.1 (47.2-69.3)	94/141
Consistent condom use during AI in last 12 month with occasional partners	34.6 (25.5-43.9)	87/204
≤ 24	42.2 (24.9-57)	31/63
≥ 25	31.7 (20.6-42.1)	56/141
Had anal/oral paid male partner in last 12 months	4 (1.5-6.9)	12/278
Used condom at last AI	58.5 (21.3-95.8)	8/12
Consistent condom use during AI in last 12 month	21.2 (3.2-49.2)	4/12
Had male client (received material reward for sex) in last 12 months	29.7 (22.8-37.1)	80/278
Used condom at last intercourse with male client	52.2 (36.8-64.9)	48/80

Key indicators	RDS population estimates, % (95% CI)	n/N
Had female partner in last 12 months	66.6 (58.6-74.6)	173/278
Used condom at last intercourse with female partner	50.5 (40.2-60.6)	100/173
≤ 24	67.4 (51.5-80.7)	33/49
≥ 25	54 44-63.8)	67/124
Ever been involved in group sex	29.7 (22.9-35.7)	102/278
Used condoms at last group sex	51.1 (38.2-64.7)	50/102
Consistent lubricant use during AI	10.4 (6.8-15.1)	28/269
Never use lubricant during AI	56.9 (50.1-63.5)	153/269
STIs		
Test for any STI in last 12 months	21.2 (14.9-27.9)	82/278
Never tested for any STI	47.5 (39.7-55.4)	110/278
Knowledge, opinions and attitudes towards HIV/AIDS		
Have heard about the HIV/AIDS	91.5 (86.8-95.2)	260/278
Correctly answer 5 questions (UNGASS indicator)[1]	19.9 (13.9-25.7)	65/278
≤ 24	11.4 (4.5-21.3)	10/86
≥ 25	24 (16-31.9)	55/192
Correctly answer 4 questions (National indicator)[2]	23.8 (17.3-30.3)	74/278
≤ 24	16.1 (6.6-25.8)	16/86
≥ 25	27.1 (18.6-36)	58/192
Know where to get HIV test	46.1 (37.6-53.2)	163/278
Test for HIV In last year	15.5 (11.2-21.4)	73/278
Never tested on HIV	70.6 (62.5-76.8)	160/278
Received HIV test last year and know their results	15.8 (11.3-21.7)	72/278
≤ 24	15.5 (7.7-24)	24/86
≥ 25	16.6 (11.7-24.7)	48/192

[1] One can reduce HIV risk if one properly uses condoms during every sexual contact (yes) and One can get HIV as a result of a mosquito bite (no) and One may protect oneself from HIV by having one uninfected and reliable partner (yes) and One can get HIV by taking food or drink that contains someone else's saliva (no) and Healthy - looking person can have HIV (yes)

[2] One can reduce HIV risk if one properly uses condoms during every sexual contact (yes) and One may protect oneself from HIV by having one uninfected and reliable partner (yes) a Healthy - looking person can have HIV (yes) and Person with first group blood can get HIV infection (yes)

Key indicators	RDS population estimates, % (95% CI)	n/N
Experience of violence		
Experienced violence in last 12 months	7.4 (3.7-11.9)	25/278
Preventive program coverage		
Know where to get HIV test and received condoms from preventive programs in last 12 months	20.9 (15.5-28.1)	102/278
≤ 24	21 (11.7-31.4)	30/86
≥ 25	21.2 (15-30.1)	72/192
Biomarker		
Positive for HIV	6.4 (2.8-10.8)	19/271
≤ 24	1.6 (0-3.7)	3/83
≥ 25	7.7 (3-14.1)	16/188
Positive for Syphilis (RPR)	10.9 (6.4-16.1)	37/271
Positive for Syphilis (TPHA)	26.6 (20.3-34.8)	93/271
Positive for HBsAg	4.3 (1.6-7.4)	12/271
Positive for HCV	17.3 (11.4-24)	42/271
Positive for HSV-2	32 (24.6-39.2)	86/271
Positive for Chlamydia (IgA)	15.9 (11-21.4)	45/271
Positive for Chlamydia (IgG)	18.6 (13.2-24.5)	54/271

Introduction

Georgia is among the countries with low HIV/AIDS prevalence but with a high potential for developing a widespread epidemic. The estimated prevalence of HIV among the adult population is 0.1%[3]. In its early stage the HIV epidemic in Georgia showed similarities with the epidemics in most Eastern European countries, with injecting drug use being the major mode of transmission. However, over the past several years, while transmission through injecting drug use is still the prevailing route for HIV spread, the role of heterosexual transmission is increasing. According to the national HIV surveillance system infections acquired through homosexual contact account for a small proportion of all HIV cases. In 2010, the homosexual route of transmission contributed to 4.8% of all newly registered cases[4].

In the years 2002-2007 the Save the Children Georgia Country Office under the USAID-funded STI/HIV Prevention (SHIP) project, had introduced second generation surveillance studies in the country and conducted BSSs among various most-at-risk populations (MARPs) in three major cities of Georgia – Tbilisi, the capital city, Batumi (Adjara Autonomous Republic) and Kutaisi (Imereti region).

The current study represents the subsequent wave of Bio-BSS undertaken among MSM in 2007, which was conducted using RDS sampling technique and managed to recruit 140 MSM in Tbilisi.

The objective of the 2010 Bio-BSS in Tbilisi was to measure the prevalence of HIV and other STIs (Hepatitis B and C, Syphilis, Chlamydia, Herpes type-2 virus) among MSM, to provide measurements of key HIV risk behaviours and generate evidence for advocacy and policy-making. The study was implemented within the GFATM funded HIV/AIDS surveillance system strengthening project by Curatio International Foundation (CIF), Association "Tanadgoma" and the Infectious Disease, AIDS and Clinical Immunology Research Center.

[3] Joint United Nations Programme on HIV/AIDS: Global report: UNAIDS report on the global AIDS epidemic. 2010
[4] National Center for Diseases Control and Public Health, HIV national database, 2011

Methods

Study design

The study employed a cross-sectional design and a respondent-driven sampling methodology (RDS). The key indicator for sample size calculation was condom use at last anal intercourse. On the basis of the earlier survey (2007 BSS, Tbilisi) a baseline value of the indicator was 61.7%. The current survey aimed to detect a 15% (2-sided) change of the proportion at a 95% significance level and the power of 80%. Design effect was estimated to be 2.0 based on the RDS design. The desired sample size was 300 MSM.

Formative research was conducted prior to the survey to identify seeds, MSM networking patterns and the amount of incentive required for participation in the BSS. The research included conducting 2 focus group discussions and 10 in-depth interviews with MSM. The formative research findings proved the feasibility of RDS methodology, as the majority of the participants stated that for bringing a maximum number of participants, the information about BSS research should be spread by representatives of the same group (MSM) and the best motivator for participation would be a monetary incentive. The formative research participants were also asked about their network size, participants answered that the number of MSM who they personally knew varied from 10 to 50. Based on the results, the study instrument was fine-tuned, the place and time of interview and referral coupon design were identified.

Sampling procedure

In the last two decades a variety of sampling methods have been used to recruit MSM in order to collect risk behavior data. These include time-location sampling (TLS), targeted sampling and snowball sampling, which have a number of limitations[5]. A recently developed sampling methodology (RDS) was designed to overcome these limitations. RDS combines a modified form of

[5] Abdul-Quader, A. Heckathorn, DD. Effectiveness of Respondent-Driven Sampling for Recruiting Drug Users in New York City: Findings from a pilot study. Journal of Urban Health 2006

chain-referral or snowball sampling with a mathematical system for weighting the sample to compensate for not having been drawn randomly. RDS is based on the premise that peers are better able, than outreach workers and researchers, to locate and recruit other members of a hidden population. It differs from traditional snowball sampling in three respects: RDS involves a dual incentive system – a reward for being interviewed and a reward for recruiting others into the study; subjects are asked to recruit their peers into the study and recruitment quotas are introduced. [6]

A number of countries have successfully conducted behavioural surveys among MSM using RDS sampling method[7], although now an increasing number of countries, especially in Western Europe, recruit MSM through the internet[8].

RDS was used to recruit MSM in the capital city - Tbilisi. Inclusion criteria for participation in the study included the following: 1) age 18 years or older, 2) homosexual anal or oral contact during the last 12 months and 3) being a resident of Tbilisi.

Fieldwork was conducted by Association "Tanadgoma" which is a trusted and well-respected organization with extensive experience of working with the target population. The first step was to recruit initial respondents, so-called "seed" participants. The seeds were carefully selected to represent the demographic profile and socially diverse MSM network in Tbilisi (age, socio-economic status, occupation, education). In total 7 seeds were involved in the study.

Following an eligibility assessment and provision of informed consent the seeds underwent the behavioral and biological components of the study. After completion, they were given three uniquely coded non-replicable coupons to recruit three additional peers to participate in the study. The seeds were instructed on how to refer other eligible MSM. Each coupon was printed with a serial number, study location (map) and information about the monetary incentive. Those who came

[6] Heckathorn, DD. Respondent driven sampling: A new approach to the study of hidden populations". Soc Probl. 1997;44:174-199 ; Heckathorn, DD. Respondent driven sampling, II. Deriving population estimate from chain referral samples of hidden populations. Soc probl. 2002;49:11-34

[7] Bozicevic I., Voncina L, Munz M. Literature review on HIV epidemics among MSM in 27 countries of central and Eastern Europe

[8] Mapping of HIV/STI behavioral surveillance in Europe. European Centre for Disease Prevention and Control, 2009

to the study site with a recruitment coupon and met the inclusion criteria were interviewed. These participants in turn received three coupons to recruit their peers in the study. Each participant was offered a financial incentive of 15 Gel (9 USD)[9] and an additional incentive of 5 Gel (3 USD) for each eligible person they recruited.

The data on the coupons given to participants was managed by the MS Excel based software specifically developed for the coupon tracking[10].

To ensure that participants met the eligibility criteria, a verification procedure was followed at the study site. The verification procedure, conducted by an experienced social worker, included a preliminary informal discussion. The participants were asked different questions face to face in a private setting, so that it was possible to detect whether they belonged to the target group. The basic questions asked were related to knowledge and experience of the participants about places and means for MSM to find partners, sexual practices they use with their partners, frequency of partner change, health problems related to homosexual relations they have experienced etc.

The eligible respondents were assigned a unique identification number. Also, in order to overcome subject duplication, field coordinators and social workers paid special attention to physical characteristics of the participants such as height, weight, scars, tattoos and some biometric measures. Every shift of field workers included some person from the previous shifts, in order to make sure that the same person did not take part in the survey for a second time.

Recruitment results for MSM

The recruitment started with 5 seeds. An additional 2 seeds were added later (1 seed - after 7 weeks and another seed – after 9 weeks) to ensure sufficient number of respondents. The basic demographic characteristics of the seeds are presented in

[9] According to the average exchange rate of the National Bank of Georgia for the period 01/10/10 – 30/12-2010.
[10] Author Hrvoje Fuchek, Iskorak, Zagreb, Croatia

Table 2 below:

Table 2: Basic characteristics of the seeds

Basic Demographic Characteristics of seeds	n
Age groups	
<=24	3
25-34	3
>=35	1
Nationality	
Georgian	7
Level of education completed	
Secondary	3
Higher/incomplete higher	4
Marital status	
Divorced/separated	1
Never been married	6
Employment status	
Permanent job	2
Temporary job	1
Student	1
Unemployed	3
Monthly income	
<=100 GEL	1
101-300 GEL	1
301-500 GEL	2
501-700 GEL	2
701-1000 GEL	1
Total	7

All eligible respondents were asked six questions about their network size, specifically: “How many MSM do you know in Tbilisi)?”, “Among those, how many do you know personally (you know them by name and they know yours)?”, “How many of those are above 18 years”?, “How many of those had homosexual contact during the last 12 months?”, “How many of those have you seen during the last 3 months?” and “How many of those (who are over 18 years of age, are MSM, had homosexual contact during the last 12 months) would you consider to recruit for the study?”.

The reported social network sizes ranged from 1 to 300, with a median of 7 and interquartile range (IQR) 4–20.

Following the verification procedure 12 potential participants were defined as non eligible for the survey, as 5 of them were not MSM and 7 were MSM but did not have homosexual contact during the last 12 months. Also, 2 participants withdrew from the survey during the interview, most likely due to the fear of their status being disclosed.

The respondents who returned to receive the incentive for recruitment were additionally asked about whether anyone refused to accept coupons from them and what were characteristics of those who refused. However, it was not possible to use this information due to a very low response rate to these questions. Nevertheless from the coupon management data it was obvious that in total 834 coupons were released of which 271 (32.5%) were returned.

Recruitment was stopped after 10 weeks of fieldwork due to time constraints related to the completion of the project. The sample size comprised of 278 MSM (including seeds). Coupon distribution was stopped one day prior to the end of the field work.

All seeds accomplished from shortest three (2 seeds) to longest 10 (2 seeds) waves. The majority (65.3%) recruited friends and about one third - acquaintances.

Table 3: Relation between recruiter and recruited

Relation with recruiter	n	%
Friend	177	65.3
Relative	6	2.2
Acquaintance	81	29.9
Sex partner	7	2.6
Total	271	

Measurements

The survey instrument used in the study was a standardized behavior questionnaire for MSM provided in the manual *Behavior Surveillance Surveys: Guidelines for Repeated Behavior Surveys in Populations at Risk for HIV*, published by Family Health International. The questionnaire with slight modification was applied in the previous BSS study undertaken in Georgia in 2007. For the given BSS a few additional revisions were made to the questionnaire in order to make sure that all indicators for reporting according to UNGASS Declaration of Commitment on HIV/AIDS were captured by the study instrument. A Georgian version of the questionnaire was pre-tested.

“Tanadgoma” staff were selected as interviewers based on the following criteria: familiarity with the

target population and previous experience in similar studies. Interviewers' training, which also included orientation on RDS procedures, was provided prior to the field implementation.

The biomarker component involved testing of blood specimens for HIV, Syphilis, Hepatitis B (HBV), Hepatitis C (HCV), Chlamydia and Herpes simplex virus type 2 (HSV-2). Sample analyses for HIV, syphilis (TPHA), Hepatitis B and C were done at the laboratory of the Infectious Disease, AIDS and Clinical immunology Research Center in Tbilisi. Sample analyses for the rest of the infections (syphilis RPR, Chlamydia IgA and IgG, Herpes) were done at the laboratory of the Institute of Hematology and Transfusiology.

Table 4: Test systems used in biomarker component

Biomarker	Screening	Confirmation
HIV	The Genscreen Ultra HIV rapid test	Western Blot (HIV Blot 2.2, Genelabs Diagnostics)
Syphilis	Treponema Pallidum Hemagglutination Assay (IMMUTREP-TPHA OD081, Omega Diagnostics)	
	Rapid Plasma Reagin (Quicktest for the Qualitative and Quantitative Determination of Reagin Antibodies in Serum or Plasma, Human Gesellshaft fuer Biochemica und Diagnostica mbH)	
Chlamydia	ImmunoComb Chlamydia trachomatis IgA Anti Chlamydia trachomatis IgA (ORGENICS Ltd., Israel, MedNet GmbH, Germany)	
	ImmunoComb Chlamydia trachomatis IgG Anti Chlamydia trachomatis IgG (ORGENICS Ltd., Israel, MedNet GmbH, Germany)	
HBV	HBsAg (BIO_RAD Lab Inc, Germany)	(BIO_RAD Lab Inc, Germany)
HCV	Anti-HCV, Standard Diagnostics Inc. Korea	Immunoblot, MP Biomedicals Asia Pacific, Singapore
HSV-2	HSV Type 2 IgG ELISAю BioActive Diagnostica Gmbh, Germany	

The study protocol and questionnaires were approved by the National Ethical Committee of the HIV/AIDS Patients Support Foundation. During the study design and field implementation the following ethical issues were taken into consideration:

- Participation in the surveys was strictly voluntary. Participants were free to withdraw at any time and were informed that refusal or withdrawal would not affect services they would normally receive.
- Complete anonymity was ensured. No names or personal identifiers were recorded; all documentation was labelled only by a study number.
- The staff engaged in the study, were trained in discussing sensitive issues and protecting participants' confidentiality and human rights.
- Individuals identified as positive for HIV or other STIs were offered counseling and referred

to designated facilities for further testing and/or free treatment.[11]

Data collection

The data collection period was from September 27, 2010 to December 3, 2010. Data collection took approximately 10 weeks. Interviews were available from 12:00 pm to 10:00 pm, Monday to Friday, at a fixed site – the Tanadgoma office.

After registration, the participants were taken to interview rooms to maintain privacy. Face-to-face individual interviews were conducted in Georgian by the trained interviewers. Each interview lasted on average 20 minutes. Following the completion of the behavioral component, participants were asked to voluntarily provide a blood sample for testing on different infections (see above, section "Measurements"). If a participant agreed, pre-test counseling was provided and 6 ml of blood was collected on site by a trained nurse. The blood samples were transported to the laboratories assigned for doing the testing (at the Infectious Disease, AIDS and Clinical Immunology Center and at Institute of Haematology and Transfusiology). If transportation was not done the same day the samples were refrigerated at 2-8 C^{o} and transported the morning after. The blood tests were anonymous-linked. Each MSM that volunteered to provide a blood specimen was given an identification number, which was recorded on the blood tube and the questionnaire. In addition the participant was given a card with the identification number and with the organization's telephone number and address. The testing results were reported back to the study site within two weeks. The participants were asked to return, with their identification card, to receive their results. Post-test counseling was provided on site.

Internal quality control of the fieldwork was provided by the Tanadgoma staff and external control – by the CIF staff. The completed questionnaires were checked for consistency, and any problems identified were followed up with the interviewers.

[11] Free treatment is provided for HIV, syphilis, and Chlamydia infections

Data processing and analysis

Data entry and analysis took place at the CIF office. The data was entered into SPSS software. Any discrepancies were resolved by examining frequencies and cross-tabs and checking the logic of all variables in the datasets. Hard copies of the completed questionnaires were kept at the CIF office.

Respondent Driven Sampling Analysis Tool version 6.0.1 (RDSAT, Cornell University, 2004) software was used for the analysis of RDS population estimates.

Frequencies, cross-tabulations and prevalence estimates were performed using the RDSAT. Means and medians were calculated by the SPSS as RDSAT does not produce such estimates. Bivariate analysis was done using logistic regression. The results are presented as odds ratios (ORs) with 95% confidence intervals (95% CI). Missing values were excluded from the analysis.

The RDSAT makes it possible to estimate characteristics of a broader network of MSM based on network data collected from the study sample. In our results tables (see **Annex 1**) the data is presented in two columns: the left column presents population estimates of a larger MSM network in a given location with 95% confidence intervals; the right column presents the proportion of the sample including seeds.

Network structures and recruitment patterns were analyzed by using a network visualization program NetDraw 2.081.

Description of the target group

The formative research conducted prior to the BSS revealed a certain hierarchy and the existence of different subgroups in the MSM population in Tbilisi. This has been proved also by outreach experiences of Tanadgoma. The group of Men who have Sex with Men in Tbilisi can be divided according to two parameters: **social status** ("with money" and "without money", according to the language used by MSM) and **involvement in commercial sex**.

1. Description of MSM according to the social status:

1.1. MSM with a lower socio-economic background

This group includes mainly: MSM who have arrived in the capital from other cities/regions in search of employment or other material benefits; and MSM that live in the capital, which have a low or no income or are unemployed (often these are persons living below the poverty line).

MSM with a relatively higher socio-economic background

This group includes persons with a relatively higher income, who can afford to visit bars, clubs and

other gathering places; and so called “elite” gays, which include persons in high positions, for example, representatives of show business, in general, public faces.

As a rule, representatives of these two – high and low – tiers do not meet each other in everyday life. However, there is some type of relationship between them: mainly, generally knowing each other or having sexual contacts with persons belonging to the other group. The higher the social level of the MSM, the less the probability that he is involved in commercial sex as well as a lower frequency of occasional sexual contacts. And vice versa, the lower the social level of MSM, the higher the number of sexual partners and the higher the number of cases of involvement in commercial sex.

2. Description of MSM according to involvement in commercial sex:

2.1 MSM involved in commercial sex

This group includes mainly MSM that belong to relatively lower socio-economic background and in exchange for material remuneration offer sexual services to other men.

The main reasons for involvement in commercial sex are: money, the opportunity of frequent change of partners and the possibility of having a good time.

This category of MSM can be characterized as representatives of the lower social tier , who are in dire economic situations; are residents of the capital, or from a regional city/village, that have been in the capital for some time; the majority have no other occupation or job (quite a lot out of them are students); they tend not to be married or are separated, they have occasional or permanent female partners. They can be accessed at: the open gathering places in the city (so-called MSM cruising areas); as well as some closed places - facilities (baths, saunas etc), which are known to be places where MSM can meet each other.

2.2 MSM not involved in commercial sex

This group includes mainly MSM that belong to middle and a relatively higher socio-economic background. These MSM mainly establish homosexual contacts with other men for the following reasons: pleasure - satisfying sexual needs, the opportunity of a frequent change of partners.

This category of MSM can be characterized as representatives of a higher social tier with a normal economic situation; they are residents of the capital, or from a regional city/village, that have been in the capital for some time; the majority have some other occupation or job; they tend to be married, with children, or have occasional or permanent female partners. They can be accessed at: the open gathering places in the city (known as places of gathering for MSM commercial sex workers), where they are looking for commercial or non-commercial sexual partners; the open

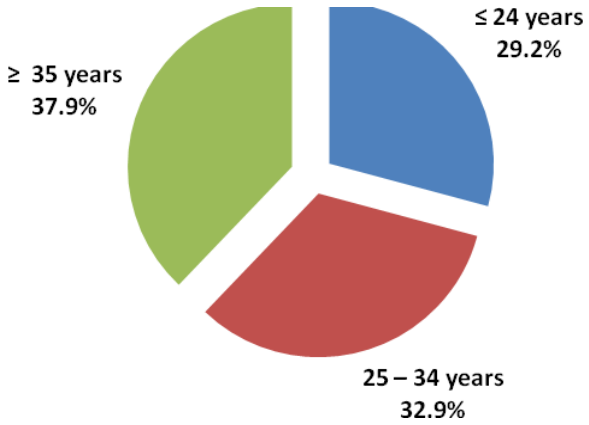
gathering places in the city (known as places of gathering for MSM); closed entertainment places (cafes, bars, baths, movie theatres, etc), which are known to be places where MSM can meet each other.

Study results

Socio-demographic characteristics

The median age of the recruited MSM was 29 (interquartile range (IQR) 23–39), with the age ranging from 18 to 71 years. About one third of the respondents were less than 25 years of age.

Figure 1: Age distribution



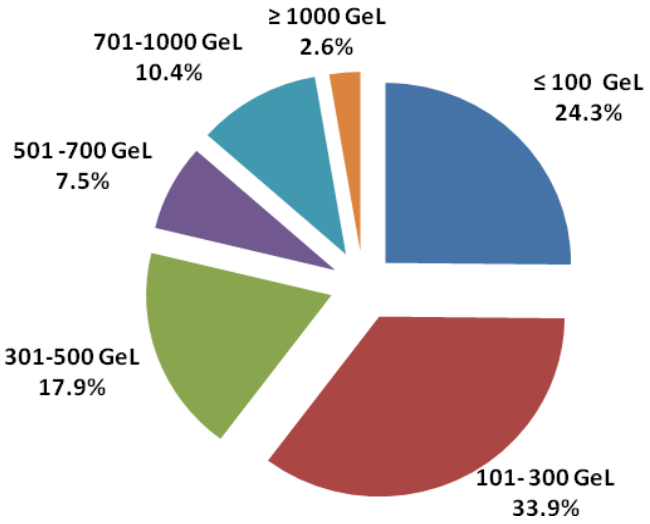
The study found very few MSM with no education (1.2%). More than half had received secondary level education and about 40% - higher or incomplete higher education.

Only 7 respondents were internally displaced persons. Three quarters of the sample consisted of MSM who were of Georgian nationality. About 60% were never married and about one fifth (21.6%) were currently married. Only 18% reported being divorced or separated.

Approximately one third of the respondents had permanent employment, while about half were without work and one fifth – had temporary occupations. Only 10 out of the 271[12] respondents were students.

Monthly income for the majority (more than 75%) of the interviewed MSM did not exceed 500 GEL (280 USD[13]), with the majority (33.9%) having an income of 100-300 GEL (56-168 USD) and those with an income of ≤ 100 GEL (≤ 56 USD) coming in second place (24.3%). Of the respondents included in the study about one fifth of MSM had an income ranging between 500-1000 GEL. Only 11 out of 271 reported having an income of more than 1000 GEL (560 USD) per month.

Figure 2: Monthly income in GEL[14]



Alcohol and drug use

The study investigated alcohol and drug consumption for the last 12 month period. The majority of the respondents had been drinking at least once a week (38.1%), about one fifth reported not drinking alcohol at all (21.4%) and less than 10% of MSM reported drinking alcohol every day.

[12] This sample (271) excludes seeds.
[13] According to the average exchange rate of the National Bank of Georgia for the period 01/10/10 – 30/12-2010.
[14] In the title here and below unweighted samples are given. Sample size: N=278

Drug use during the last 12 months was reported by 21.1% of MSM. Of them, Marijuana was the most frequently cited drug (more than 92% out of 60 MSM).

Only 4.9% had injected drugs during the last 12 months. Heroin and buprenorphine were the most frequently injected drugs. Self-made amphetamine-type drug (Jeff) was injected by only 1 respondent.

Four respondents out of the 12 with drug injection experience in the last 12 months reported injecting with used needle/syringe during their last injection episode. The study did not analyse alcohol and drug consumption before or during sex.

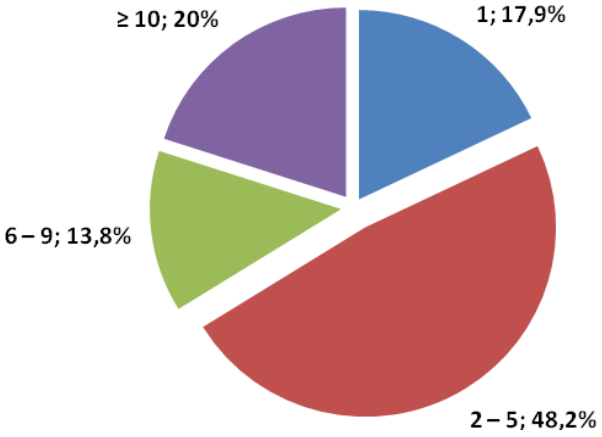
Sexual behavior

Male partners

The median number of male partners (anal/oral partners) in the last 12 months was 4. The majority (about half) said they had from 2 to 5 male partners. Being in a monogamous relationship during the same time period was mentioned by only 17.9% of respondents.

Figure 3: Number of male partners [15]

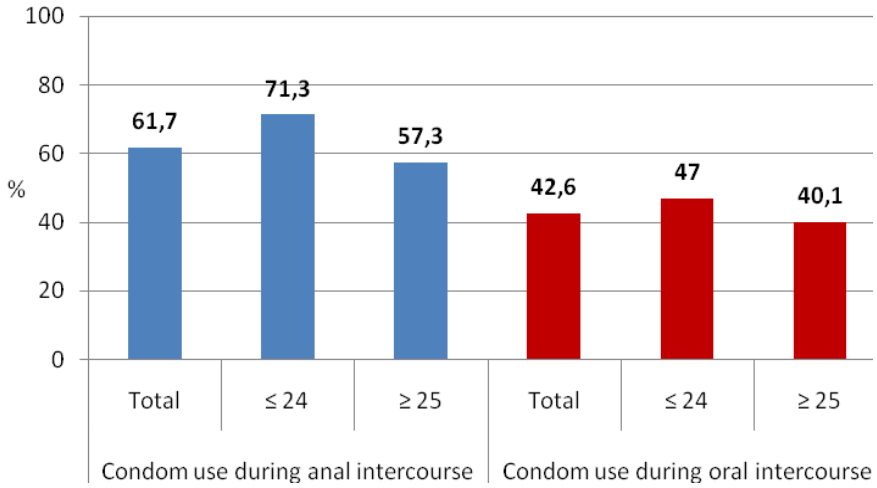
[15] Sample size: N=278



All interviewed MSM with the exception of 9 respondents had anal sexual intercourse during the last 12 months, out of which more than 60% reported using a condom during their last episode.

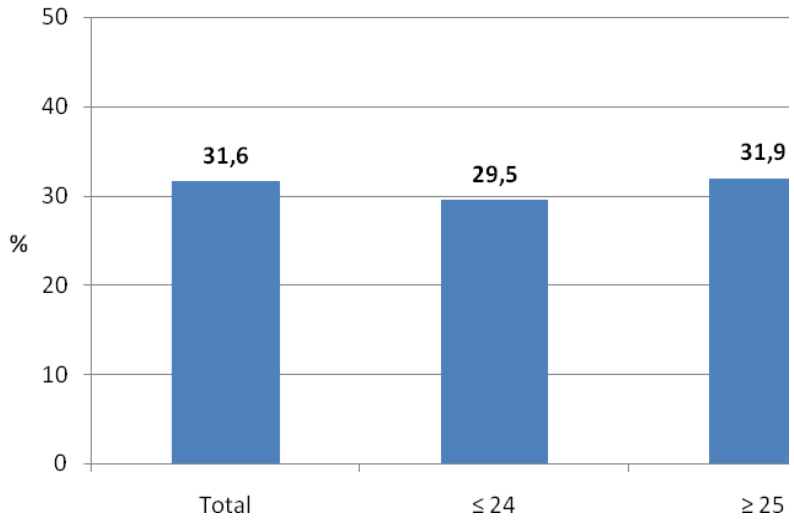
Sixty five percent of respondents reported oral sexual intercourse during the last 12 months. It is noteworthy that a smaller proportion of MSM used condoms during their last oral intercourse compared with the anal sexual intercourse (42.6% vs. 61.7%).

Figure 4: Used condom at last anal/oral intercourse[16]



About one third of MSM reported consistent condom use during anal sexual intercourse in the last 12 months.

Figure 5: Consistent condom use during AI in the last 12 months[17]



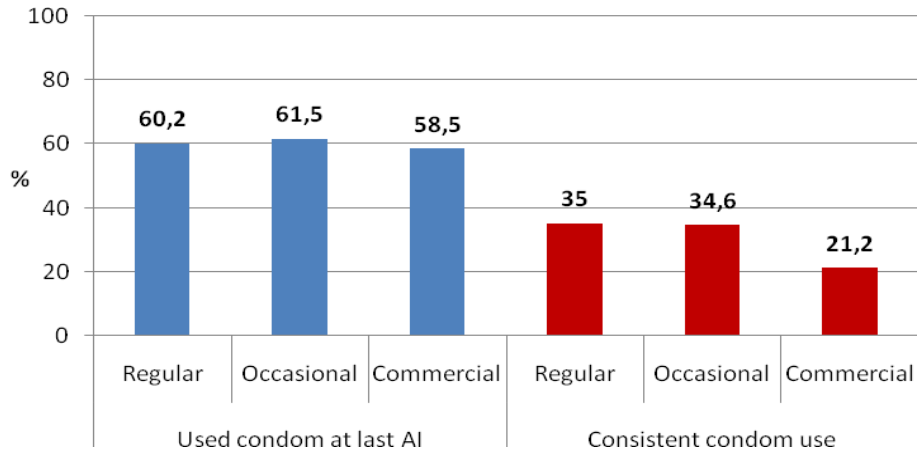
[16] Sample sizes: Anal partners: N=269, N(≤24)= 85, N(≥25)=184; Oral partners: N=186, N(≤24)= 58, N(≥25)=128
[17] Sample sizes: N=269, N(≤24)= 85, N(≥25)=184

The study also looked at various sexual behavior patterns with different types of male sexual partners (regular, occasional, and commercial).

About 60% of MSM reported having a regular male partner during the last 12 months and the median number of this type of partners was 1. More than three quarters had occasional male sexual partners (median 3). Only 12 out of 278 MSM said they paid for sex with a male partner during the last 12 months.

The results suggest that the proportion of MSM who reported condom use at their last anal intercourse (AI) varied within the same range with all types of partners (~60%). The respondents were asked to indicate the frequency of protected sex with all types of partners in the last 12 months. Consistent condom use was defined as "always" use of condom in the last 12 months. It is noteworthy that such behavior was less prevalent compared to condom use during last anal sex with the same type of partner. Consistent condom use with regular, occasional and commercial partners comprised 35%, 34.6% and 21.2% respectively.

Figure 6: Using condoms during last AI and consistent condom use with regular, occasional and commercial partners [18]



[18] Sample sizes: regular partners N=191, occasional partners N=211, commercial partners N=12

In relation to the above mentioned practices, younger MSM were more likely to use condoms during last AI with regular and occasional partners compared with their elder peers however, the difference was not statistically significant. Regarding consistent condom use with regular partners no difference was found between the different age groups.

The respondents mentioned similar reasons for not using condoms at last AI with regular, occasional and paid male partners. About one third responded they do not like using condoms at all. Others said they did not think it was necessary (29.1% out of 66 cases for regular partners and 13.7% out of 63 cases for occasional ones). It is noteworthy that more than 12% of interviewed MSM reported they did not have a condom during anal intercourse with occasional partners.

Female partners

More than 65% of MSM reported having a female sex partner during the last 12 months, with the median number being of 1 partner.

Slightly more than half of these said they used a condom at last sexual intercourse with their female partner.

Only 25.8% of respondents consistently used condoms with their regular female partners, while double that number reported condom use at all times with their occasional and paid female partners (48.2% and 45.6% respectively).

Group Sexual Practices

About one third of MSM were ever involved in group sex. Almost half of the respondents noted that the groups were mixed – involving both male and female partners and slightly more than one third reported that the groups consisted only of males. As for condom use during group sex, slightly more than half used a condom at last group sex.

Engagement in commercial sex

The respondents were asked whether they have received any type of material remuneration for sex in the last 12 months. One third (29.7%) responded positively to this question, meaning that they were engaged in commercial sex, however, only a few identified themselves as sex workers. Not surprisingly the majority from this subgroup belonged to the low socio-economic tier – 89.3% had a monthly income of less than 500 GEL.

Those who were engaged in commercial sex had a median number of 2 clients per day. The majority reported receiving money from their clients. The cost of services differed and mostly varied between 10 and 100 GEL (5.6 - 56 USD[19]), however, the total monthly income from this service for the majority of MSM did not exceed 200 GEL (112 USD). Very few reported earning more than 200 GEL per month through their engagement in commercial sex (8.1%).

Only half (52.2%) of those engaged in commercial sex said they used a condom during their last sexual intercourse with their clients.

Condoms and Lubricants

The majority of MSM mention that condoms can be easily obtained at pharmacies. It is important to note that more than one fifth of the respondents named NGOs "Tanadgoma" and "Inclusive"[20] as alternative places where condoms can be obtained.

Only 10.4% of the interviewed MSM reported consistent lubricant use during AI. From those who did not use lubricants, more than 30% said they have not heard about lubricants at all, 13.2% - did not think using lubricants was necessary and 4% did not like using lubricants.

More than half of those who were knowledgeable about lubricants knew that lubricants were also available at pharmacies and about the same proportion named "Tanadgoma"/ "Inclusive" as places where lubricants are provided.

[19] According to average exchange rate of the National Bank of Georgia for the period 01/10/10 – 30/12-2010.
[20] "Inclusive" Foundation was NGO working in the field of LGBT rights, advocacy and intergraion. The NGO ceased functioning in 2010.

Sexually Transmitted Infections (STI)

Fourteen respondents (6.6%) out of the total sample were not aware of Sexually Transmitted Infections. The respondents were further asked to list STI symptoms. The majority were able to mention at least one STI symptom (63.6%), while 26.2% refused to answer.

With regard to STI experience in the last 12 months 13.8% and 8.9% reported genital/anal discharge and genital/anal ulcers respectively.

Only one fifth of MSM reported taking any STI test during the last 12 months and about one third were tested prior to that. About half reported never being tested for STIs during their lifetime, listing "no need for testing" as a main reason for that, followed by "did not think about it at all".

Among those who had ever been tested for STIs, prevention was named the main reason for testing in half of the cases. As for the rest, the majority undertook testing after the appearance of symptoms. More than 95% were aware of their test result. When asked about their actions during the symptomatic period, 56.7% referred to a health facility, 53.2% reported they did not have sexual intercourse, 32.1% informed their sexual partners about their STI symptoms. A similar proportion reported applying self-treatment and condom use during a STI symptomatic period (14.1% in both cases).

Knowledge/ opinions and attitudes towards HIV/AIDS

From the total sample 8.5**%** were not aware of HIV. One fifth correctly answered all 5 questions according to the UNGASS indicator on knowledge of HIV prevention[21]. About one quarter correctly responded to 4 questions, according to the National Indicator on HIV knowledge[22]. MSM over 25 years of age appeared to be more knowledgeable about HIV prevention compared to their younger

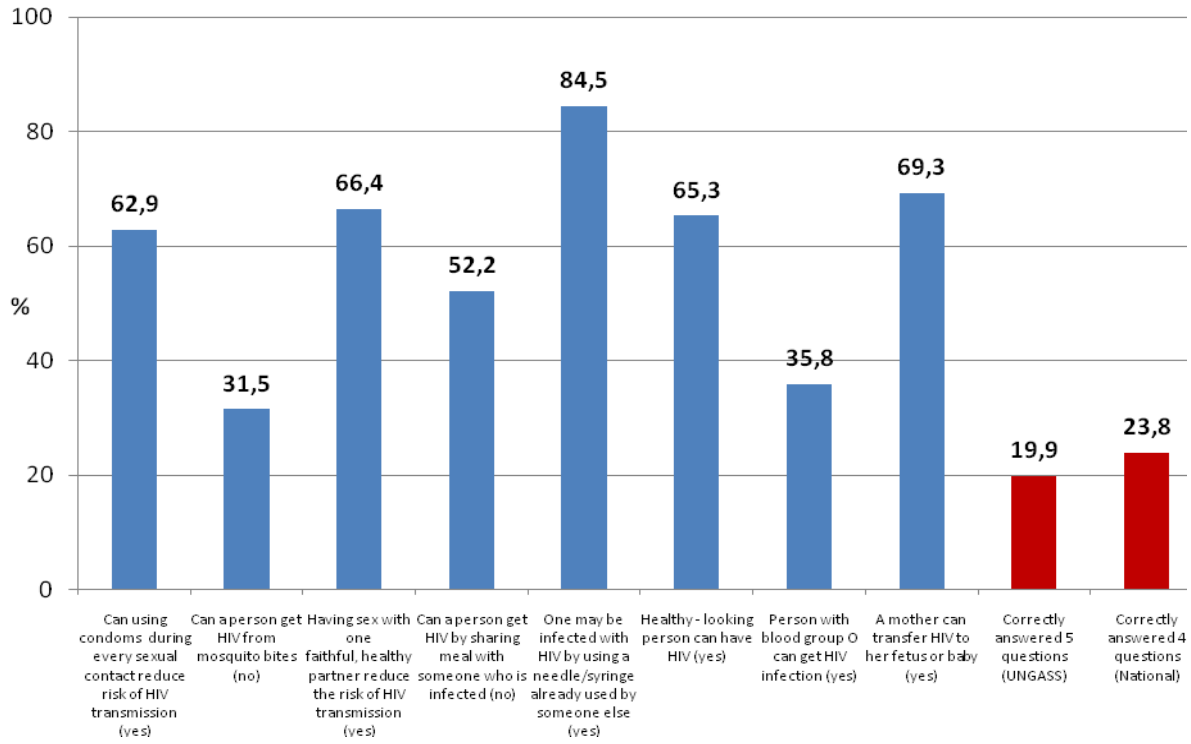
[21] Can using condoms during every sexual contact reduce risk of HIV transmission (yes); One can get HIV as a result of a mosquito bite (no); Having sex with one faithful and uninfected partner reduce the risk of HIV transmission (yes); One can get HIV by taking food or drink that contains someone else's saliva (no); Healthy - looking person can have HIV (yes).

[22] Can using condoms during every sexual contact reduce risk of HIV transmission (yes); Having sex with one faithful and uninfected partner reduce the risk of HIV transmission (yes); Healthy - looking person can have HIV (yes); Person with the blood group O can get HIV infection (yes)

peers. A statistically significant difference was found with regard to the UNGASS indicator (11.4% for <=24 age group vs. 24.0 for >=25) as well as the National Indicator on HIV knowledge (16.1% for <=24 age group vs. 27.1 for >=25).

The **Figure 7** below shows the proportion of MSM who responded correctly to each of the knowledge questions:

Figure 7: Knowledge on HIV/AIDS prevention [23]

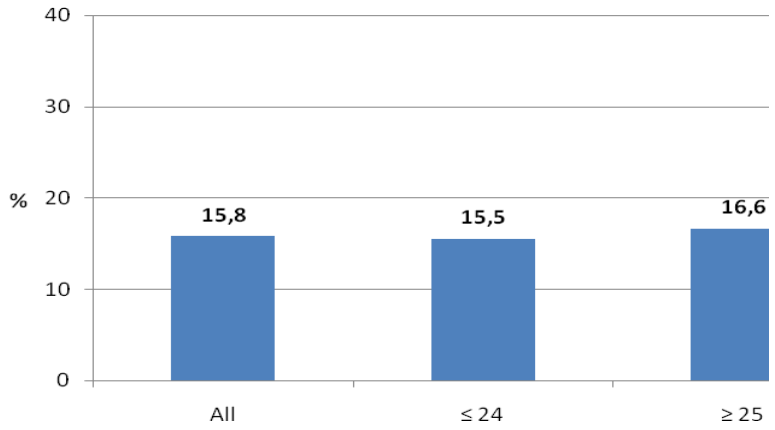


It is important to note that 46.1% of MSM knew where to get a confidential HIV test in their community. However, their testing experience and patterns did not correspond with this knowledge. The majority (70.6%) were never tested for HIV at all, only 15.5% of respondents were tested during the last 12 months and the remainder were tested prior to that.

[23] Sample size: N=278

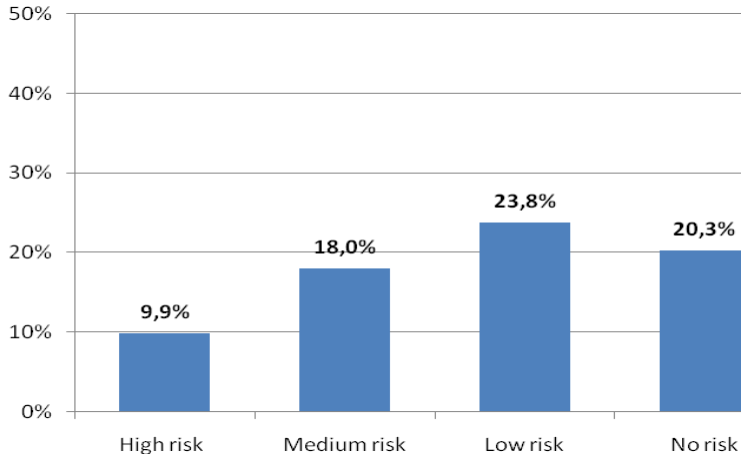
Out of those who were tested during the last 12 months almost all received their test results. From the total sample it formed 15.8%. Out of those respondents who were ever tested for HIV, 91.9% underwent the test voluntarily; the others were required to do so.

Figure 8: Were tested on HIV during the last 12 months and know their results[24]



It is also important to note that only 9.9% assessed their personal risk regarding HIV infection as high, 23.8% believed they are a low risk and about one fifth perceived no risk at all.

Figure 9: HIV risk perception[25]



24 Sample sizes: N=278, N(≤24)= 86, N(≥25)=192
25 Sample size: N=278

The survey participants were asked several questions regarding their attitudes toward HIV infected persons. More than 60% of MSM said they would take care of a HIV infected relative. More than half think that a HIV positive student and a teacher should be permitted to continue their activity, and more than half would share a meal with a HIV infected person. Only 8.4% report that they would keep it secret if a family member were infected with HIV.

Violence

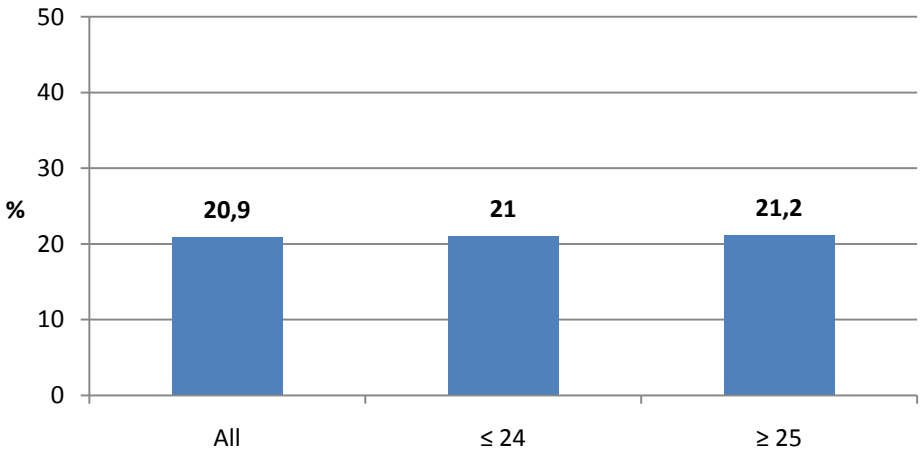
From the interviewed MSM 7.4% (25 cases) reported they had experienced violence because of sexual orientation or sexual behaviour in the last 12 months. Out of these 25 cases the majority were verbal assault (12 respondents), followed by physical (10) and sexual violence (3). In half of the cases the perpetrator of the violence was a stranger. In the rest of the cases a family member/relative (2), a friend (3) and others (3) were listed as the perpetrators.

Interventions/Media

The respondents who were aware of HIV/AIDS (254) were asked to list all sources of information on this disease. TV/Radio was named in the majority of cases (62.2%), followed by friends (33.4) and NGOs “Tanadgoma”/”Inclusive” (21.7). Very few (5.5%) mentioned the internet as a source of information. Among the trusted sources, TV was the leading one (29.9%), NGO representatives and health facility/medical personnel were named as the second and the third most trusted source for information on HIV (24.4% and 23.7% respectively).

The respondent was considered to be covered by preventive program interventions if a) he knew where to go for HIV testing and b) he had received a condom during the last 12 months. Only 20.9% of the total 278 MSM fell under this category, with the same proportion in both the young and elder age groups.

Figure 10: Preventive program coverage [26]



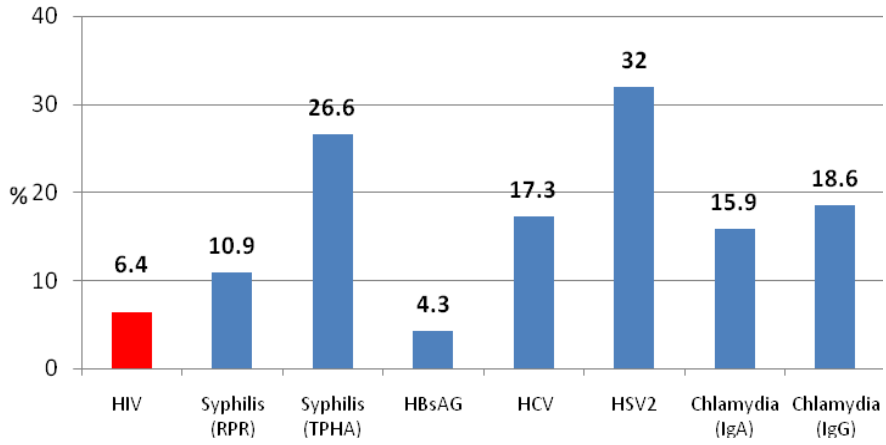
Biomarker

Blood samples for testing on various infections (HIV, Syphilis (PRP), Syphilis (TPHA), HBV, HCV, HSV-2, Chlamydia (IgA), Chlamydia (IgG) were taken from all except 7 of the study participants. These MSM refused to participate in the biomarker component of the study. The analysis results show that 6.4% of the MSM were HIV positive. The characteristics of these 19 HIV positive MSM is given in Table 5 below. Syphilis (TPHA) was detected in 26.6% of the MSM. Tested by two laboratory methods (TPHA and RPR), active syphilis was found in 12.9% of respondents.

[26] Sample sizes: N=278, N(≤24)= 86, N(≥25)=192

Figure 11 below presents biomarker results for various tests:

Figure 11: Biomarker [27]



The HBV (positive for HBsAg), HCV and HSV-2 infections were more prevalent among representatives of the older age group. No statistically significant difference was found between the under 25's and older age groups for other infections.

Chlamydia testing was done through serologic test (ImmunoComb Chlamydia bivalent test) which is not considered as a gold standard in Chlamydia infection diagnostics. No confirmatory testing was carried out, therefore our biomarker does not provide conclusive evidence of current infection with C. *trachomatis*.

Among the 19 HIV positive MSM, active syphilis was found in 7 of the cases (36.8%) and more than two infections were found among 5 (26.3%) of the HIV infected MSM.

Table 5: Characteristics of HIV positive MSM

Key indicators	n/N
Socio-demographic characteristics	
Age (years)	
<=24	3/19

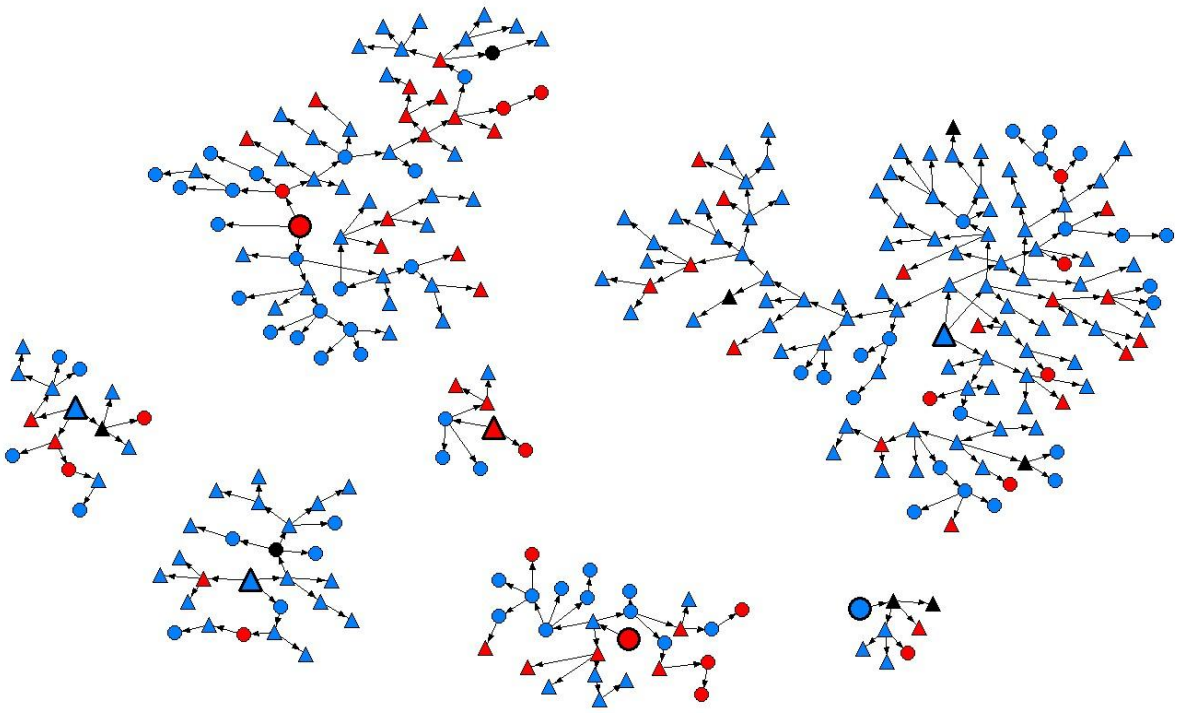
[27] Sample size: N=271

Key indicators	n/N
25-34	8/19
>=35	8/19
Marital status (married)	5/19
Drug injected during last 12 month	0/19
Sexual behavior	
Median anal/oral partners in last 12 month	1.74
Used condom at last anal intercourse (AI)	14/19
Consistent condom use during AI in last 12 month	8/19
Used condom at last AI with regular partner	9/13
Used condom at last AI with occasional partner	11/16
Used condom at last intercourse with male client	2/3
Used condom at last intercourse with female partner	7/10
Test for STIs	
Ever tested for STIs	16/19
Never tested for any STIs	3/19
Test for any STI in last 12 months	8/16
Test for HIV	
Ever tested	12/19
Never tested	6/19
No response	1/19
Received HIV test last year and know their results	12/12
Biomarker	
Positive for Syphilis (RPR)	7/19
Positive for Syphilis (TPHA)	14/19
Positive for Syphilis (RPR+TPHA)	7/19
Positive for HBsAg	3/19
Positive for HCV	0/19
Positive for HSV-2	8/19
More than two infections (incl. HIV)	5/19

Recruitment pattern

The graphs below show the recruitment pattern of the MSM initiated by seeds (shown with larger symbols). Figure 12 shows that the majority of the MSM had a low monthly income. In small chains the MSM with a higher income group preferentially recruited peers with a high income, and many of them did not produce further referrals. This may indicate that representatives of the higher income group were reluctant to participate in the study.

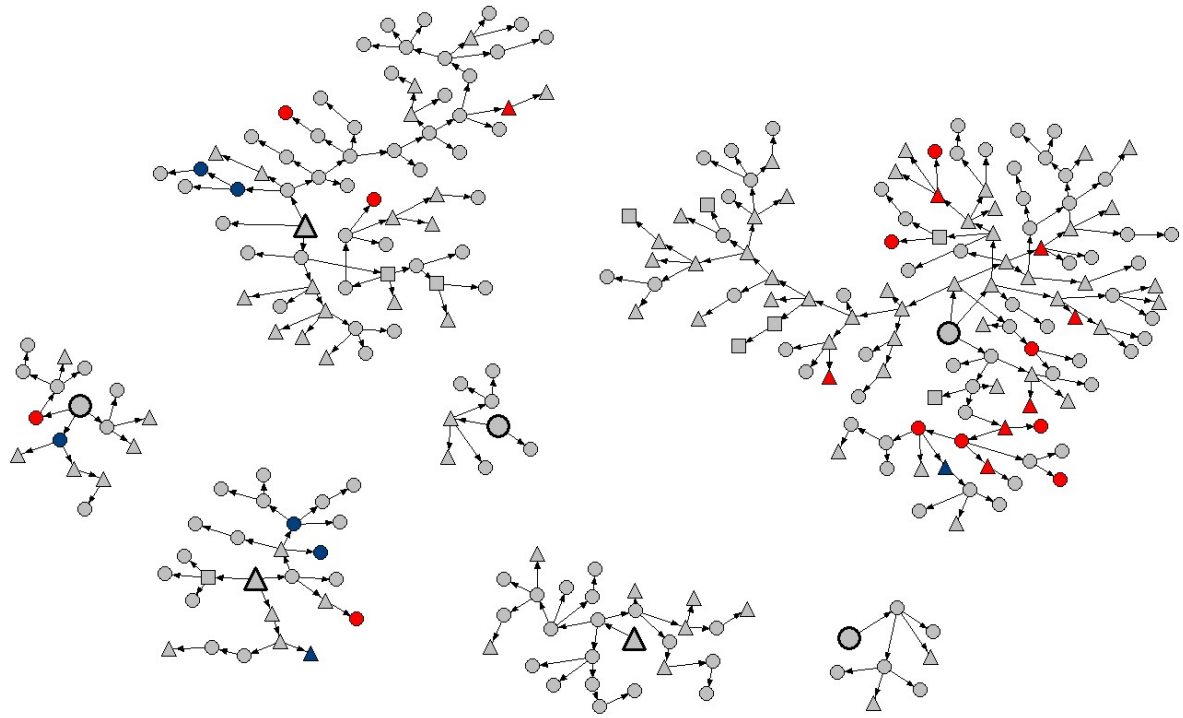
Figure 12: Referral chain of monthly income and age groups



Legends:
Income per month in GEL: blue - < 500 GEL; red - ≥ 500 GEL; black - no response
Age groups: circle - ≤ 24 years; triangle - ≥ 25

A higher density of HIV infection (shown with red symbols) is found in one of the networks (see Figure 13). Of all the 19 infected cases, 11 had unprotected anal sex with their partners during the last 12 months, which may indicate that they were unaware of their status or did not use a condom with a sero-concordant partner.

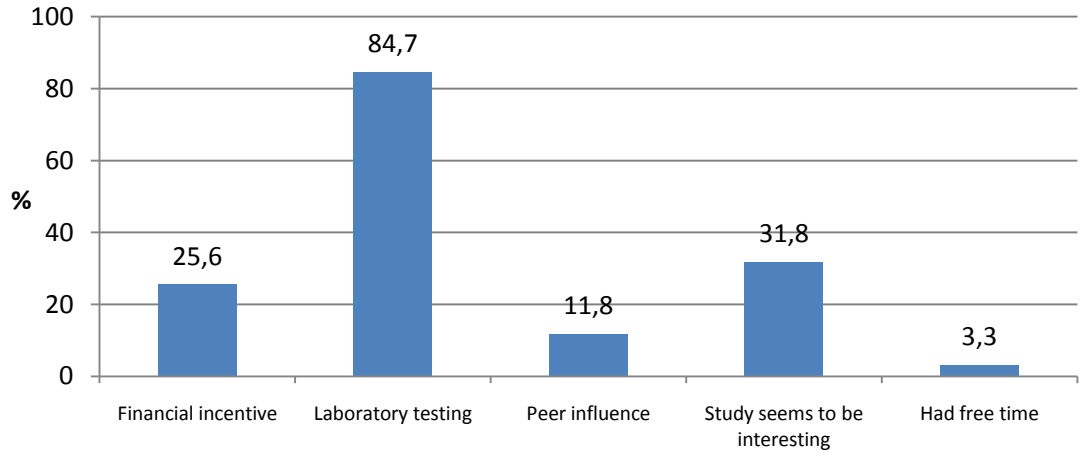
Figure 13: Referral chain for HIV cases and high risk sexual behaviour (HIV prevalence and consistent condom use with male partner)



Legends:
HIV positivity: red - HIV positive; grey – HIV negative; blue - N/A (not tested)
Condom use during the last 12 months with male partners: triangle - consistent condom use; circle - inconsistent condom use

It is noteworthy that the majority of the respondents named laboratory testing as the main motivating factor for participating in the study (84.7%). Other reasons for participating are shown in the **Figure 14** below:

Figure 14: Reason for participation in BSS study [28]



[28] Sample size: N=278

Conclusions and Discussion

The findings of the survey are briefly summarized in the conclusions below:

Socio-demographic characteristics

The socio-demographic structure of the sample indicates it was more representative of the 25 years and over age group, those with secondary and higher/incomplete higher education, not currently married, Georgian by nationality, and representatives of the lower socio-economic layer (almost half of the interviewed MSM had no occupation and the monthly income for the majority did not exceed 500 GEL (280 US Dollars)).

The RDS methodology managed to bring to the survey mainly MSM from a lower socio-economic background – those that have quite a low income, no or temporary employment. Although three seeds were taken from the higher layers of the MSM subgroups, they were not able to bring a lot of other participants (waves). Hence, the survey findings are more representative of the lower socio-economic segment of this target group.

Alcohol and drug use

Alcohol and drug use are considered to be risky behaviors connected with HIV transmission. The study did not show high percentages of alcohol use (especially its everyday use) or drug use. Quite a small percentage (4.9%) reported injecting drugs during the last 12 months. In general, in Eastern Europe injecting drug use prevalence among MSM is higher than in the general adult population (0.15-2.0%)[29]. However the data from some countries of Eastern European and Central Asian regions demonstrate that despite injecting drug use being the major driving force of the epidemic, there are comparatively low levels of injecting drug use among MSM (Ukraine – 1.3%, Russia – 4%,

[29] Aceijas C, Stimson G.V, Hickman M, Rhodes T. Global overview of injecting drug use and HIV infection among injecting drug users. *AIDS 2004, 18:2295–2303*

Belarus – 2%)[30]. The data related to drug use among MSM from Caucasian countries are higher and Georgia falls within this pattern.

None of IDU MSM was HIV positive and one third (4) was infected with Hepatitis C.

Alcohol and drug use is not widespread in this group. The two high risk groups – MSM and IDUs – hardly overlap, which probably has a positive influence on the development of the epidemic in Tbilisi, as the infection does not travel from one most-at-risk population to another.

Sexual behavior

The MSM in this survey had several types of both male and female partners.

Sexual behavior with male partners

The average number of male partners was 4 and the majority of the respondents (82%) reported having more than one male partner in the last 12 months.

When considering sexual behaviour with different male sexual partners, interesting patterns were found: condom use at last AI with all types of male partners was more prevalent than consistent condom use, and oral sex was less protected compared with anal sex, in terms of condom use during last intercourse. These patterns are well-established by other studies among MSM[31, 32]. However, our study also found that condom use at last AI and consistent condom use did not differ between regular and occasional male partners. This pattern does not correspond to the literature evidence showing that MSM generally tend to have more frequent protected sexual practices with occasional than with regular partners.

[30] "Men having sex with men in Eastern Europe: Implications of a hidden HIV epidemic. Regional analysis report", AIDSTAR-Two, November 2, 2010. *www.aidstar- two.org*

[31] Mirandola M, Folch Toda C, Krampac I, Nita I, Stenekova D, Stehlikova D, Toskin I, Gios L, Fochia JP, Breveglieri M, Furegato M, Castellani E, Bonavina MG, the SOALON network. HIV Bio-behavioral survey amng men who have sex with men in Barcelona, Bratislava, Bucharest, Ljubliana, Prague and Verona, 2008-2009. Euro Serveill. 2009;14(48)

[32] Davidovich U, de Wit JB, Stroebe W. Assessing sexual risk behaviour of young gay men in primary relationships: the incorporation of negotiated safety and negotiated safety compliance. AIDS. 2000;14(6)701-6

Group sex experience and involvement in commercial sex

About one third of the MSM were ever involved in group sex and slightly more than half used a condom at last group sex.

Engagement in commercial sex was also found to be quite prevalent among the investigated segment of MSM population. About one third (29.7%) sold sex during the last 12 months and only half of this high risk subgroup reported using a condom during last sexual intercourse with their clients.

Sexual behaviour with males and females

Two thirds of respondents reported having a sexual relationship with a female in the past year. A Regional analysis report indicates, that the percentage of MSM who had sex with women during the last 12 months varies from 21% in Belarus to 41% in Azerbaijan[33]. Georgia was the leader among the countries of the region, with 47.1% of MSM with bisexual activity, as shown by the 2007 BSS in Tbilisi. The current survey revealed an even higher rate of MSMW. Various factors could have contributed to this. Because of social pressure and stigmatization MSM might engage in sexual behaviour with women to dispel any doubts about their homosexuality. High rates of reported sexual activity with women could also reflect social desirability bias. Still, this is a fact that needs a more in-depth qualitative investigation.

The study results revealed behavioral factors that create grounds for HIV/STI transmission from MSM to their female partners.

Among those who had both male and female partners and inconsistently used condoms during anal sex with their male partners (68) only 11.7% always used condom with their regular female partner. To compare condom use practices with males and females we analyzed the sample of MSM who had both male and female partners. See Table 6 below.

[33] "Men having sex with men in Eastern Europe: Implications of a hidden HIV epidemic. Regional analysis report", AIDSTAR-Two, November 2, 2010. *www.aidstar- two.org*

Table 6: Condom use behaviour with male and female partners

Condom use behavior	N	Male partners	Female partners	P value
Condom use at last intercourse	165	66.1%	57.6%	P=0.029
Consistent condom use with regular partners	96	43.8%	35.4%	P=0.001
Consistent condom use with occasional partners	84	35.7%	45.2%	P< 0.001

Interesting tendencies were found:

- Condom use during last intercourse with a female partner is lower than with a male partner (anal intercourse).
- The same can be found in regard to consistent condom use with regular male and female partners – with females MSM are less likely to use condoms.
- However, consistent condom use with occasional male partners is lower than with occasional female partners.

This picture reflects the risk perception of MSM. It could be that anal sex with occasional male partners is considered less risky than sex with occasional females, while female regular partners are less protected compared to regular male partners of MSM.

The study showed high sexual activity among MSM. Risky sexual practices are quite widespread: The MSM reported a large number of different types of partners, both male and female, low use of condoms, especially its consistent use with male and female occasional and commercial partners, involvement in group sexual practices and in commercial sex. High risk practices with male partners among MSM with bisexual activity raise concerns about the potential bridging role of MSM in HIV transmission to general population.

Lubricants and condoms

More than half of the MSM never used lubricants, the leading cause of which is low awareness of its existence.

The majority of the respondents know where to obtain condoms and half of those who are aware of lubricants know where to obtain them. Among the places where lubricants and condoms could be obtained pharmacies are leading, followed by NGOs “Tanadgoma” and “Inclusive”.

The research revealed that knowledge about lubricants is low, along with their consistent use. MSM are well aware of places for getting condoms.

Sexually Transmitted Infections

The majority are aware of STIs and their symptoms in men. Only one fifth of MSM reported taking an STI test during the last 12 months and about one third were tested prior to that. About half

reported never having been tested for STIs during their lifetime.

Knowledge about STIs is quite high, but STI testing is very low among MSM.

Knowledge/opinions and attitudes towards HIV/AIDS

Although HIV/AIDS awareness is high, not all MSM are aware of this disease (8.5%). At the same time, adequate knowledge about HIV/AIDS is not high.

Less than half of MSM knew where to get a confidential HIV test in their community. The majority were never tested for HIV at all and only 15.5% of respondents were tested during the last 12 months. Almost all of them received their test result. Notably at least one third of HIV infected individuals were unaware of their status as they were never tested for HIV during their lifetime.

Only 9.9% assessed their personal risk regarding HIV infection as high, 23.8% believed they are a low risk and about one fifth perceived no risk at all.

It was revealed that HIV-associated stigma exists among this group, although it is not very high.

Univariate analysis showed that those who correctly answered 4 questions on HIV prevention were more likely to undergo HIV testing during their lifetime (OR 2.6; 95% CI 1.5-4.5). Those who perceived to be at no risk of HIV acquisition were less likely to be tested on HIV (OR 0.3; 95% CI 0.1–0.7).

At the same time, no recent HIV testing experience contributes to risky behavior. The likelihood of not using a condom at last AI among those who have not been tested on HIV during the last two years is twofold higher (OR 2.3; 95% CI 1.2-4.4).

No association was found between knowledge of HIV prevention and consistent condom use with any type of male partners, indicating a gap between knowledge and sexual behavior.

Knowledge about HIV infection is high, although this knowledge does not play a protective role in risky behavior. There is inadequate awareness of the availability of confidential HIV testing, leading to an alarmingly low HIV testing practice. Personal risk assessment does not correspond to the real risks. The low testing for HIV is associated with low awareness of confidential HIV testing and personal risk perception among MSM, in addition, unprotected sex at last AI is associated with no recent HIV testing experience.

Violence

From the interviewed MSM, 7.4% reported that they have experienced violence because of sexual orientation or homosexual behaviour in the last 12 months.

Violence because of sexual orientation exists, although it is not widespread.

Interventions/Media

Since preventive interventions should be planned according to the sources of information that MSM trust most, mass media seems to be the major and best way for conveying messages to this segment of the MSM population. Other trusted sources – NGO representatives and medical personnel – should also be used for this purpose. However, other communication channels (e.g. internet) could be better in terms of reaching other, higher segments of MSM in Tbilisi.

Coverage by preventive intervention measured by an awareness of where to get a confidential HIV test and receipt of a condom during the last 12 months was low - only 20.9% of the MSM are covered by preventive programs.

It is interesting to see how the information received from certain sources influences risk behavior. The likelihood of inconsistent use of condoms with occasional male partners is twofold higher, when "Tanadgoma" was not listed as a source of information - (OR 1.9; 95% CI 1.1 – 3.4).

The second factor influencing the behavior of MSM is coverage by preventive interventions, in particular, condom distribution. Not getting condoms during the last 12 months was positively associated with unprotected sex during the last anal intercourse (OR 1.8; 95% CI 1.1-3.2) on the one hand and with inconsistent condom use with occasional partners (OR 2.7; 95% CI1.5-4.9) on the other hand.

Coverage by preventive programs is very low, on the other hand preventive interventions (such as information from trusted sources and condom distribution) have a positive effect on decreasing risky sexual behavior among MSM. This indicates an urgent need to scale up preventive efforts and cover more individuals from this vulnerable group.

Biomarker

The most important finding of this study is that HIV infection has already reached the level of a concentrated epidemic among MSM in Tbilisi (6.4%; 95% CI 2.8-10.8).

As for the other STIs included in the survey biomarker component, prevalence of Herpes and Chlamydia are quite high. It is interesting that the prevalence of Hepatitis B is much lower than of Hepatitis C, although Hepatitis B is more likely to be transmitted through sexual contacts. Given the small proportion of MSM reporting injecting drugs, prevalence of Hepatitis C is high. Although the study did not investigate longterm drug injecting practices among MSM, we can speculate that lifetime risky injecting behavior could have contributed to the high prevalence of Hepatitis C infection. BSS among injecting drug users revealed 64.6% HCV prevalence among male IDUs in

2006[34]. This issue might need further investigation through qualitative research. The literature suggests a sudden emergence of HCV as an STI among HIV-positive MSM, which is poorly understood at this moment[35]. However our study did not show an association between HIV and HCV infections.

Regression analysis showed that HIV infection is positively associated with Syphilis (OR 4.6; 95% CI 4.7-12.8) and Hepatitis B (OR 5.1; 95% CI 1.2-20.5).

In univariate analysis HIV positivity was further analyzed towards various co-factors, such as demographic characteristics, type of partners, condom use behavior, HIV knowledge and testing practice, however no associations were found with the exception of the number of male partners: an increase in every male partner has a 1.6% increase in odds of having HIV infection (OR 1.016; 95% CI 1.002-1.03).

HIV infection has reached the level of a concentrated epidemic among MSM in Tbilisi. HIV-STI co-infections coupled with very low STI and HIV testing uptake indicate that strategies to test more MSM are required. At the same time, due to risk practices and infections' rate among HIV positive MSM, there is a necessity to implement positive prevention strategies.

Comparison of several indicators with the previous BSS survey

It is interesting to compare the results of this survey with the previous BSS conducted in 2007, according to several UNGASS indicators. Un-weighted data were presented in the 2007 BSS report, therefore for the comparison with the current survey we used un-weighted data as well.

It should be noted that 66 of the respondents (23.7%) took part in both the previous (2007) and current surveys.

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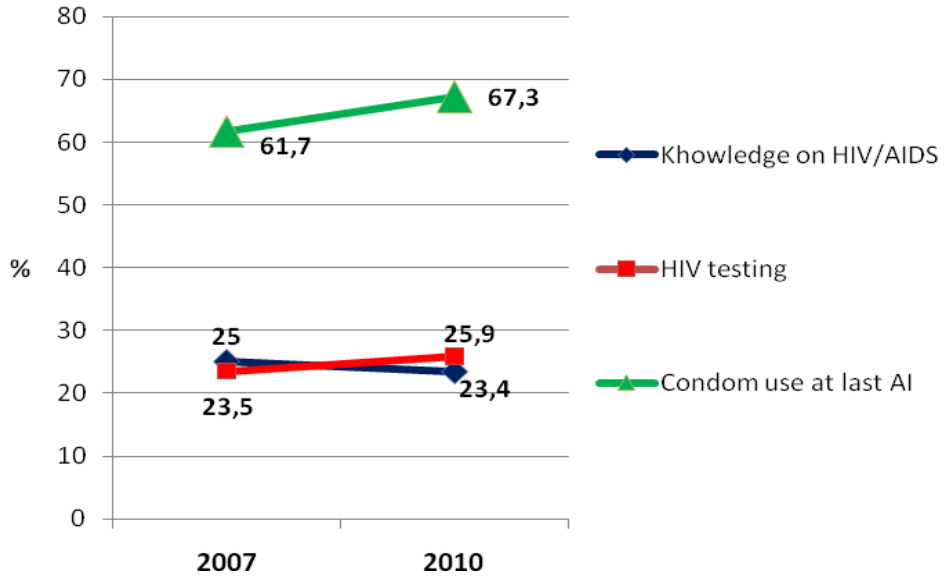
[34] Dershem L, Tabatadze M, Sirbiladze T, Tavzarashvili L, Todadze K, Tsagareli T. Characteristics, high-risk behaviors and knowledge of STI/HIV/AIDS, and prevalence of HIV, syphilis and hepatitis among injecting drug users in Tbilisi, Georgia: 2002 – 2006

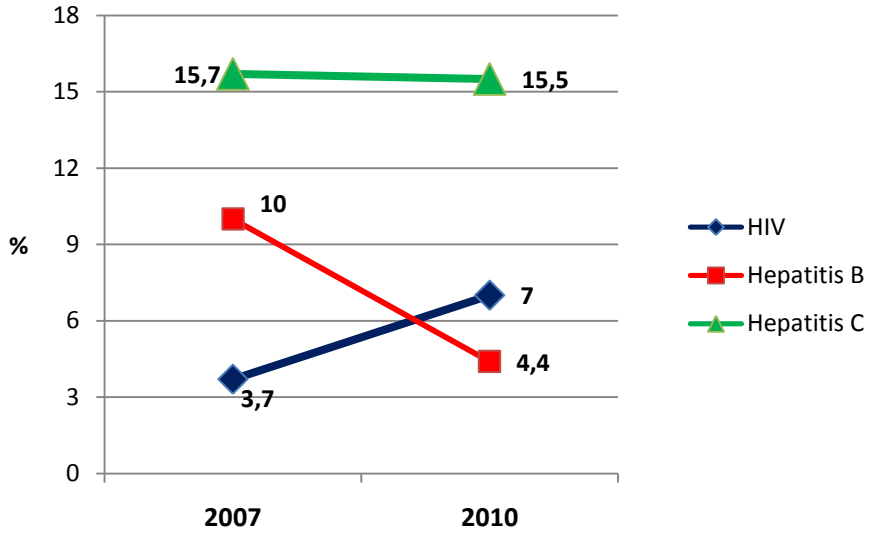
[35] Urbanis AT, Van Houdt R, Van de Laar TJ, Coutinho RA. Viral Hepatatis among men who have sex with men, epidemiology and public health consequences. Euro Surveill. 2009;14(47)

Figure 15: Comparison of three UNGASS indicators with the MSM BSS of 2007



This **Figure 15** shows a certain increase in condom use during the last AI, a decrease in the knowledge indicator and an increase in the HIV testing indicator. But all these changes proved to be statistically insignificant.

Figure 16: Comparison of HIV and Hepatitis prevalence with the MSM BSS of 2007



This figure demonstrates an increase in HIV prevalence from 3.7% to 7%. This difference is also not statistically significant, which could be explained by a small sample size (140 participants) in the survey of 2007, meaning that the sample size was not big enough to receive a statistically significant change. However, the results suggest that there is a concentrated epidemic in this group of MSM.

As for Hepatitis B and C, only the difference in the prevalence of Hepatitis B proved to be statistically significant. It could be stated that the main indicators for this group did not show significant changes over the last 3 years, but the most dramatic indicator is an increase in HIV prevalence that has changed the HIV epidemiological picture in the country.

Recommendations

The following recommendations are proposed based on the findings of this study:

1. Increase coverage of this particular segment of MSM by preventive interventions aiming at risk behaviour reduction. The interventions should continue to include, but not be limited to, condom distribution, awareness rising and STI/HIV testing:

a) Apply various approaches to increase accessibility of HIV-related preventive services such as outreach, individual and group counseling and peer education

b) Develop STI testing guidelines specifically for the MSM population

c) Expand MSM-friendly STI/HIV testing services

d) Recommend HIV testing to males attending the STI/genitourinary clinics

e) Reinforce safer sex messages, especially on the importance of protected sex with occasional male partners

f) Involve representatives of the group in the planning and implementation of preventive interventions. This, additionally, will contribute to reaching other segments of MSM population – subgroups with a higher social-economic background (see recommendation 2).

g) Launch, adapt and implement innovative strategies and models, which would contribute to both increasing the knowledge of MSM about HIV/STIs and also their referral to the services.

h) Implement positive prevention strategies among HIV positive MSM

2. Study and reach other segments of MSM (with a higher socio-economic background) through implementing different approaches and methods, such as internet-based interventions.

3. Focus on reducing HIV-associated, as well as, homosexuality-associated stigma and discrimination. Due to the negative attitudes of society towards MSM, this stigmatization hinders them being covered by preventive interventions and, at the same time, creates barriers for MSM to refer to HIV-related services. It is desirable that, along with increasing the accessibility of services, some attention is paid to the reduction of stigma and discrimination.

4. Further investigate interesting tendencies revealed through the survey, e.g.: the factors underlining different patterns of condom use with female and male partners; injecting drug use patterns in this group, etc.

5. Conduct regularly non-coercive, anonymous, ethical and systematic surveillance of MSM, both behavioral and selected biological markers, in order to monitor the prevalence dynamics of HIV infection and other STIs.

Annex 1. Data table

Sociodemographic characteristics	RDS population estimates, % (95% CI)	n/N
Age		
≤ 24	29.2 (21-37.8)	86/278
25 – 34	32.9 (25.3-40.1)	96/278
≥ 35	37.9 (29.7-47.2)	96/278
Mean (minimum-maximum)	32 (18-71)	
Median	29	
Education		
No education	1.2 (0-3.3)	2/278
Elementary	3.2 (0.8-7.1)	6/278
Secondary	53.2 (45.4-61.3)	145/278
Higher / incomplete higher	42.4 (34.4-49.6)	125/278
IDP status		
(Yes)	2 (0.5-3.8)	7/278
Nationality		
Georgian	74.3 (65.6-81.7)	228/278
Other	25.7 (18.3-34.4)	50/278
Marital Status		
Married	21.6 (15.7-26.7)	54/278
Divorced / Separated	17.9 (12.4-24)	50/278
Widower	0.9 (0-2.5)	2/278
Never married	59.5 (51.9-67.9)	171/278
Occupation		
Permanent job	28.2 (21.9-34.3)	85/278
Temporary job	21.7 (15.8-27.3)	58/278
Student	3.8 (1.4-6.7)	11/278
No occupation	46.4 (39.9-54)	124/278
Monthly Income		
≤ 100 GEL	24.3 (18.4-30.7)	62/278
100 – 300 GEL	33.9 (26.9-40.4)	94/278
300 - 500 GEL	17.9 (13.1-23.2)	55/278
500 -700 GEL	7.5 (3.7-11.1)	21/278
700 - 1000 GEL	10.4 (6.5-15.9)	27/278
≥ 1000 GEL	2.6 (0.9-5.1)	11/278
Alcohol and drug use	**RDS population estimates, % (95% CI)**	**n/N**
Alcohol use		
Drink alcohol every day	8.1 (4.8-12.4)	24/278
Drug use		
Drug used during last 12 month	21.1 (14.6-27.8)	60/278

Mostly used drug (Marijuana)	92.2 (83-99)	56/60
Drug injected during last 12 month	4.9 (2.3-8.1)	12/278
Mostly injected drug (Heroin)	62.2 (30.3-92.8)	7/12
Mostly injected drug (Buprenorphine)	28.9 (5.6-61.5)	4/12
Injected with used needle/syringe during last injection	29.7 (1.4-60.4)	4/12
Sexual behavior	**RDS population estimates, % (95% CI)**	**n/N**
Male partners		
Number of anal/oral partners in last 12 month		
1	17.9 (12.3-24.8)	51/278
2 – 5	48.2 (41.5-56)	114/278
6 – 9	13.8 (9.1-18.1)	43/278
≥ 10	20 (14.2-25.5)	70/278
Median anal/oral partners	4	
Had anal intercourse during last 12 month	95.3 (91.4-98.5)	269/278
Used condom at last anal intercourse (AI)	61.7 (54.2-70.7)	181/269
≤ 24	71.3 (61.9-84.3)	64/85
≥ 25	57.3 (48.8-68.7)	117/184
Had oral intercourse during last 12 month	64.9 (58-71.1)	186/278
Used condom at last oral intercourse	42.6 (34.6-51.7)	90/186
≤ 24	47 (32.1-63)	30/58
≥ 25	40.1 (30.7-51.6)	60/128
Consistent condom use during AI in last 12 month	31.6 (24.2-39.4)	97/269
≤ 24	29.5 (18.2-40.9)	31/85
≥ 25	31.9 (22.9-41.7)	66/184
Regular male partners		
Had anal/oral regular partner in last 12 months	60.4 (52.1-68.6)	191/278
Median number of anal/oral partners	1	
Used condom at last AI	60.2 (51.1-69.6)	117/187
≤ 24	71.4 (56.6-85.9)	46/67
≥ 25	54.6 (44-67)	71/120
Consistent condom use during AI in last 12 month	35 (25.7-43.4)	73/187
≤ 24	33.1 (21.6-50.5)	25/67
≥ 25	35.5 (23.5-46.4)	48/120
Occasional male partners		
Had occasional anal/oral partner in last 12 months	76.6 (69.9-82.8)	211/278
Median number of anal/oral partners	3	
Used condom at last AI	61.5 (52.9-70.8)	141/204
≤ 24	71.6 (58.2-86)	47/63
≥ 25	57.1 (47.2-69.3)	94/141
Consistent condom use during AI in last 12 month	34.6 (25.5-43.9)	87/204
≤ 24	42.2 (24.9-57)	31/63

≥ 25	31.7 (20.6-42.1)	56/141
Paid male partners		
Had anal/oral paid partner in last 12 months	4 (1.5-6.9)	12/278
Median number of anal/oral partners	0	
Used condom at last AI	58.5 (21.3-95.8)	8/12
Consistent condom use during AI in last 12 month	21.2 (3.2-49.2)	4/12
Engagement in commercial sex		
Had male client (received material reward for sex) in last 12 months	29.7 (22.8-37.1)	80/278
Self-identified as sex worker	19 (9.1-31)	15/80
Median number of clients during a working day in last 12 months	2	
Cost of commercial sex service (GEL)		
<=10	2.9 (0-9.1)	1/71
10-20	16.3 (6.5-28.5)	11/71
20-50	37.3 (24.9-51.2)	23/71
50-100	23.8 (12.3-34.5)	21/71
>=100	16.8 (6.5-29.6)	14/71
Do not know	2.9 (0-9.2)	1/71
Monthly income from commercial sex service (GEL)		
<=50	11.4 (2.8-22.6)	5/71
50-100	6.2 (0.9-14.4)	5/71
100-200	13.6 (5.5-21.4)	15/71
200-300	3.1 (0-10)	2/71
300-500	3.1 (0-8.6)	5/71
500-1000	1.8 (0-5.9)	1/71
>=1000	0.1 (0-0.4)	1/71
Do not know	36.2 (23.4-51)	16/71
No answer	24.5 (12.2-35.4)	21/71
Used condom at last intercourse	52.2 (36.8-64.9)	48/80
Female partners		
Had female partner in last 12 months	66.6 (58.6-74.6)	173/278
Median number of regular partners	1	
Median number of occasional partners	1	
Median number of paid partners	0	
Used condom at last intercourse	50.5 (40.2-60.6)	100/173
≤ 24	67.4 (51.5-80.7)	33/49
≥ 25	54 44-63.8)	67/124
Consistent condom use with regular partners in last 12 month	25.8 (15.9-35.5)	40/128
Consistent condom use with occasional partners in last 12 month	48.2 (37.4-58.9)	55/109
Consistent condom use with paid partners in last 12 month	45.6 (27.3-65)	20/36
Reasons for not using condom at last AI with regular male partner		

Don't like it	30.6 (17.8-46.2)	17/66
Didn't think necessary	29.1 (15.7-45.7)	23/66
Reasons for not using condom at last AI with occasional male partner		
Did not have it	12.2 (4.2-21.4)	12/63
Don't like it	30.3 (16.8-43.7)	17/63
Didn't think necessary	13.7 (2.9-27)	9/63
Reasons for not using condom at last AI with paid male partner		
Did not have it		2/4
Don't like it		2/4
Engagement in group sex		
Ever been involved in group sex	29.7 (22.9-35.7)	102/278
Used condoms at last group sex	51.1 (38.2-64.7)	50/102
Group composition during group sex		
Only male	34.9 (23.4-47.3)	48/102
Only female	18.8 (9.8-30.9)	13/102
Mixed	48.7 (34.8-61.4)	47/102
Place where condoms can be obtained		
Pharmacy	93.5 (89.7-97)	259/277
Tanadgoma/Inclusive	23.3 (16.1-28.9)	101/277
Lubricants use		
Consistent lubricant use during AI	10.4 (6.8-15.1)	28/269
Never use lubricant during AI	56.9 (50.1-63.5)	153/269
Reasons for not using lubricants (most frequently mentioned reasons)		
Do not know what it is	30.7 (23.5-39.7)	60/269
Don't like it	4.1 (1.6-6.9)	15/269
I do not think it is necessary	13.2 (8.2-18.7)	28/269
Place where lubricants can be obtained		
Pharmacy	52.2 (38.3-64.8)	55/116
Tanadgoma	45.6 (32.3-59.2)	68/116
STIs	**RDS population estimates, % (95% CI)**	**n/N**
Aware of STIs		
Yes	92.1 (88.4-95.9)	261/278
No	6.6 (3.3-10.4)	14/278
Do not know	0.9 (0-2.2)	1/278
No response	0.4 (0-0.9)	2/278
Knowledge of symptoms of STI		
Yes	63.6 (54.9-70.4)	187/278
No	10.2 (6.3-14.9)	21/278
No response	26.2 (20.3-33.8)	70/278
Experience of STI		

Genital /anal discharge in last 12 months	13.8 (8.7-18.5)	35/278
Genital /anal ulcers in last 12 months	8.9 (4.9-13.1)	21/278
Test for STI		
In last 12 months	21.2 (14.9-27.9)	82/278
More than 12 months	27.9 (22-34.2)	79/278
Do not know	3.3 (0.9-6.3)	6/278
No answer	0.1 (0-0.3)	1/278
Never tested	47.5 (39.7-55.4)	110/278
Reasons for testing		
Prevention	50 (39.7-60.5)	97/178
After appearance of symptoms	43.4 (32.6-52.5)	59/167
Partner had STI	2.3 (0-6.6)	4/167
Other	4 (1.1-8.4)	6/167
No answer	0.3 (0-0.8)	2/167
Awareness of test results		
Yes	96.1 (91.4-99.5)	162/167
Reasons for not testing		
Don't need	55.9 (43.8-66.5)	62/109
Did not think about it at all	27.6 (17.7-37.4)	30/109
Referral for treatment and preventive actions during STI symptoms manifestation		
Health facility	56.7 (40.4-74.3)	33/50
Private doctor at home	26.4 (12.1-41)	14/50
Pharmacy	0	0/50
Traditional healer	4.7 (0-11.9)	1/50
Self-treatment	14.1 (3.4-29)	5/50
Informed sex partner about STI symptoms	32.1 (18.1-47.1)	18/50
No sexual intercourse during symptoms	53.2 (37.7-70)	27/50
Condom use during symptoms	14.1 (4.3-26.3)	8/50
Did nothing	1.1 (0-2.6)	1/50
Knowledge, opinions and attitudes towards HIV/AIDS	**RDS population estimates, % (95% CI)**	**n/N**
Have heard about the HIV/AIDS		
Yes	91.5 (86.8-95.2)	260/278
No	8.5 (4.8-13.2)	18/278
HIV knowledge		
One can reduce HIV risk if one properly uses condoms during every sexual contact (yes)	69.2 (60.9-76)	211/278
One can reduce HIV risk if one properly uses condoms during every AI (yes)	62.9 (54.8-69.8)	189/278
One can get HIV as a result of a mosquito bite (no)	31.5 (24.7-34)	107/278
One may protect oneself from HIV by having one faithful and uninfected partner (yes)	66.4 (58.3-73.4)	202/278
One can get HIV by taking food or drink that contains someone else's saliva (no)	52.2 (43.6-59.4)	161/278
One may be infected with HIV by using a needle/syringe already used by someone else (yes)	84.5 (78.5-90.6)	249/278

Healthy looking person can have HIV (yes)	65.3 (56.7-73.3)	199/278
Person with the blood group 0 can get HIV infection (yes)	35.8 (28.6-42.8)	108/278
A mother can transfer the HIV/AIDS virus to her fetus or baby (yes)	69.3 (61.1-76.3)	217/278
Correctly answer 5 questions (UNGASS indicator)[36]	19.9 (13.9-25.7)	65/278
≤ 24	11.4 (4.5-21.3)	10/86
≥ 25	24 (16-31.9)	55/192
Correctly answer 4 questions (National indicator)[37]	23.8 (17.3-30.3)	74/278
≤ 24	16.1 (6.6-25.8)	16/86
≥ 25	27.1 (18.6-36)	58/192
Know where to get HIV test		
Yes	46.1 (37.6-53.2)	163/278
Test for HIV		
In last year	15.5 (11.2-21.4)	73/278
In last 1 - 2 years	4.8 (2.1-8.1)	14/278
More than 2 years	9.2 (5.1-13.8)	31/278
Never tested	70.6 (62.5-76.8)	160/278
Received HIV test last year and know their results	15.8 (11.3-21.7)	72/278
≤ 24	15.5 (7.7-24)	24/86
≥ 25	16.6 (11.7-24.7)	48/192
Motivation for testing		
Voluntarily	91.9 (84.8-98.1)	111/118
Was required	8.1 (1.9-15.2)	7/118
HIV risk perception		
High risk	9.9 (6-14.7)	31/278
Medium risk	18 (12.3-23.8)	62/278
Low risk	23.8 (16.9-29.8)	69/278

[36] One can reduce HIV risk if one properly uses condoms during every sexual contact (yes) and One can get HIV as a result of a mosquito bite (no) and One may protect oneself from HIV by having one faithful and uninfected partner (yes) and One can get HIV by taking food or drink that contains someone else's saliva (no) and a Healthy - looking person can have HIV (yes)

[37] One can reduce HIV risk if one properly uses condoms during every sexual contact (yes) and One may protect oneself from HIV by having one faithful and uninfected partner (yes) Healthy - looking person can have HIV (yes) and Person with first group blood can get HIV infection (yes)

No risk	20.3 (14.5-26.2)	63/278
Stigma	**RDS population estimates, % (95% CI)**	**n/N**
Statements		
Would you have a meal with a person who is diseased with HIV/AIDS? (yes)	52.9 (43.5-60.9)	165/278
If your relative man were infected with HIV would you like to take care of him at your place? (yes)	66.7 (59.7-73.6)	194/278
If a student is infected with HIV, but not diseased may s/he be permitted to continue studying? (yes)	64.3 (55.5-71.8)	182/278
If your relative woman were infected with HIV would you like to take care of her at your place? (yes)	64.9 (58.1-71.8)	184/278
If a teacher is infected, but not developed AIDS may s/he be permitted to continue teaching at school? (yes)	55.9 (46.8-64.3)	157/278
If acquainted with you food salesman is infected with HIV, will you buy food from him/her? (yes)	39.2 (31.7-46.7)	126/278
If the member of your family were infected with HIV would you like it to keep this in secret? (no)	8.4 (4.7-12.8)	29/278
Violence because of sexual orientation or homosexual relations	**RDS population estimates, % (95% CI)**	**n/N**
Experienced violence in last 12 months		
Yes	7.4 (3.7-11.9)	25/278
No	92.6 (88.1-96.3)	253/278
Type of violence		
Physical	28.6 (7.9-43.6)	10/25
Verbal	84.5 (60.5-98.6)	21/25
Sexual	11.5 (0-32.4)	3/25
Perpetrator of violence		
Stranger	51.6 (32.4-88)	17/25
Family member / Relative	15.2 (0-32)	2/25
Friend	15.9 (0.37.7)	3/25
Other	17.2 (0-36.2)	3/25
Interventions / Media	**RDS population estimates, % (95% CI)**	**n/N**
Source of information of HIV/AIDS		
TV/ Radio	62.2 (54.7-70.1)	151/254
Newspapers	19.4 (14.2-25.3)	42/254
Friends	33.4 (25.4-41.4)	80/254
Clients	0	0/254
Family members	3.9 (1.2-8.4)	11/254
Tanadgoma / Inclusive	21.7 (14.7-28.7)	83/254
Internet	5.5 (2-9.9)	13/254
Health facility/medical personnel	6 (2.8-10)	12/254
Special literature/booklets	10.4 (5.9-15.3)	23/254
Other	2.6 (0.6-5.2)	8/254
Trusted source of information		
TV	29.9 (23.2-38.6)	55/234

Radio	2.8 (0.7-5.5)	6/234
Newspapers/magazines	10.4 (5.6-16.6)	17/234
Internet	11.3 (6.4-17)	24/234
Booklets	15.1 (9.8-20.6)	39/234
Friends / relatives	8.6 (4.6-13)	24/234
Other MSM	0.9 (0-2.1)	1/234
NGO representatives	24.4 (17.1-31.6)	85/234
Health facility/medical personnel	23.7 (17.6-31.7)	47/234
Preventive program coverage		
Know where to get HIV test and received condoms from preventive programs in last 12 months	20.9 (15.5-28.1)	102/278
≤ 24	21 (11.7-31.4)	30/86
≥ 25	21.2 (15-30.1)	72/192
Biomarker	**RDS population estimates, % (95% CI)**	**n/N**
Positive for HIV	6.4 (2.8-10.8)	19/271
≤ 24	1.6 (0-3.7)	3/83
≥ 25	7.7 (3-14.1)	16/188
Positive for Syphilis (RPR)	10.9 (6.4-16.1)	37/271
≤ 24	2.8 (0.7-5.7)	6/83
≥ 25	13.2 (7.6-20.3)	31/188
Positive for Syphilis (TPHA)	26.6 (20.3-34.8)	93/271
≤ 24	10.4 (4.3-18.2)	17/83
≥ 25	31.9 (24.1-42.7)	76/188
Positive for HBV	4.3 (1.6-7.4)	12/271
≤ 24	0	0/83
≥ 25	5.9 (2.1-10)	12/188
Positive for HCV	17.3 (11.4-24)	42/271
≤ 24	2.7 (0-8.4)	1/83
≥ 25	22 (14.3-30.1)	41/188
Positive for HSV2	32 (24.6-39.2)	86/271
≤ 24	18.7 (9.6-29.6)	19/83
≥ 25	37.3 (27.9-45.5)	67/188
Positive for Chlamydia (IgA)	15.9 (11-21.4)	45/271
≤ 24	12.3 (5.1-20.8)	11/83
≥ 25	16.7 (10.6-23.9)	34/188
Positive for Chlamydia (IgG)	18.6 (13.2-24.5)	54/271
≤ 24	12.1 (5.1-21.6)	9/83
≥ 25	21.1 (14.3-28.1)	45/188

Network recruitment	RDS population estimates, % (95% CI)	n/N
Reason for participation		
Financial incentive	25.6 (19.3-32.6)	68/278
Laboratory testing	84.7 (79.1-90.5)	232/278
Peer influence	11.8 (7.3-17.3)	27/278
Study seems to be interesting	31.8 (25.9-38.7)	99/278
Had free time	3.3 (1.1-6)	8/278
Other	0.5 (0-1.7)	1/278

Annex 2. Survey instrument

Questionnaire ID Number:

Coupon ID Number

Questionnaire is Coded as:

Questionnaire is Word Processed by:

Behavior Surveillance Study with Biomarker component (BSS)

Men who have Sex with Men

Tbilisi 2010

Organization: Tanadgoma

Interviewer: Please specify the location of the interview and the respondent's ID code.

Operational definition of respondent: Men who have had manual, oral, or anal sex with another man in the past six months.

Introduction: "My name is_____. Georgian organizations Curatio International Foundation and Association Tanadgoma implement a joint project titled "Establishment of evidence based base for HIV/AIDS National Program, by strengthening surveillance system", funded by Global Fund. This survey is aimed at exploring the existing situation. Has anybody taken an interview over the last five weeks for this study?

Interviewer: *If somebody has already taken an interview from the person you are talking to over the BSS period, don't take another one. Tell him, that you cannot re-interview him. Thank the person and finish conversation. If nobody has taken an interview from the person in question, continue as follows:*

Confidentiality and consent: "I'm going to ask you some very personal questions that some people find difficult to answer. Your answers are completely confidential. Your name will not be written on this form, and will never be used in connection with any of the information you tell me. You do not have to answer any questions that you do not want to answer, and you may end this interview at any time you want to. However, your honest answers to these questions will help us better understand what people think, say and do about certain kinds of behaviors. We would greatly appreciate your help in responding to this survey. The survey will take about 30 minutes to ask the questions. Would you be willing to participate?"

Interviewer's Code: _____

(Interviewer's signature certifying that the respondent has verbally agreed to the interview)

	Respondent 1
Date	
Interviewer	
Result	

Result Codes:

Completed – 1;
Partially Completed – 2;
Previously Interviewed – 3;
Refusal – 4;
Other – 5

Q1.Date and time of interview: /_____/date/____/hour/____/minute/

Signature: _____ Date _____

Section A: Background characteristics

REMEMBER THAT ONLY MALES ARE TO BE INTERVIEWED WITH THIS INSTRUMENT.

A1. How old are you?

/_____/_____/ (please specify an exact age)
No response 99

A2. What is the highest level of education you have achieved?

No education	0 **Go to A5**
Primary (4 grades)	1
Secondary (5-11 grades) (general or vocational school)	2
Incomplete higher	3
Higher	4
No response	99

A3. How long have you lived in Tbilisi?

Number of years	[__|__]
Record 00 if less than 1 year	
Don't know	88
No response	99

A4. Are you an IDP?

Yes	1
No	2
No response	99

A5. What is your nationality?

Georgian	1
Other **(please specify)**	2
No response	99

A6. What is your marital status?

Married	1
Divorced/Separated for ever	2
Widower	3
Has never been married	4

Other **(please indicate)_____**	
No response	99

A7. Are you employed?

Yes, I have permanent job	1
Yes, I have temporary job	2
Student	3
No	4
Other **(please indicate)_____**	
No response	99

A8. What is your monthly income?

100 Lari and less	1
100-300 lari	2
300-500 lari	3
500-700 lari	4
700-1000 lari	5
1000 lari and more	6
No response	99

A9. Did you take a part in the study which was carried out by Tanadgoma in 2007 and implied questionnaire filling and blood testing?

Yes	1
No	2
Do not remember	3
No response	99

Section B: Drug and Alcohol Use

B1. In the previous 4 weeks, how frequently did you drink alcohol beverages? (all type of alcohol beverages, include beer)

Every day	1
At least, once a week	2
At least, biweekly	3
Once a month	4
Don't know	88
No response	99
I did not drink (Don't read)	0

B2. Some people have tried various drugs. If you have done this, which one have you tried? (*Interviewer, read the list. For each drug use relevant option*).

B3. *Ask for the mentioned drugs* – Please tell me, how did you take this drug: did you inject, smoke, inhale, drink, breath in or how? (*Don't help; multiple answer*)

B2		B3						
Mult. ans.	**Drugs**	**Inhale/ Breath in**	**Inject**	**Smoke**	**Drink/Swallow**	**Other**	**Don't know**	**No response**
1	**Heroin** – (inhale, inject)	1	2	3	4	5	88	99
2	**Opium** – (swallow, inject)	1	2	3	4	5	88	99
3	**Poppy-seed** – (inject)	1	2	3	4	5	88	99
4	**Subutex** – (drink, inject)	1	2	3	4	5	88	99
5	**Inhalants** (e.g. glue) – (breath in)	1	2	3	4	5	88	99
6	**Marijuana** – (smoke)	1	2	3	4	5	88	99
7	**Extasy** – (drink)	1	2	3	4	5	88	99
8	**Cocaine** – (inhale, inject)	1	2	3	4	5	88	99
9	**Sedatives/hypnotics** – (drink, inject)	1	2	3	4	5	88	99
10	Other ***(Specify)*** ————————————	1	2	3	4	5	88	99
11	Has not tasted							
88	Don't know							
99	No response							

Interviewer: If the respondent has tried injecting drugs, then ask:

B4. Please try to remember, when you injected drugs for the last time, did you use syringe or needle used by someone else?

Yes 1
No 2
Don't remember 3
No response 99

Section C: Sexual history: numbers and types of partners

C1. Do you have homosexual relations? (Explain: By homosexual relations I mean that you have sexual contact – either oral or anal or both with men.)

Yes 1
No 2 **STOP the interview**

C2. During the last 12 months have you had homosexual relations??

Yes 1
No 2 **STOP the interview**

I would now like to ask you several questions about your sexual partners:

C3a. How many regular male partners have you had during last 12 month? __ *(Explain: regular partner means a spouse or sex partner with whom a relationship is stable)*

C3b. How many occasional male partners have you had during last 12 month?__ *(Explain: occasional partner means a sex partner, for a short period of time, who is not a spouse, a regular partner, or a sex worker)*

C3c. How many commercial male partners have you had during last 12 month?__ *(Explain: commercial partner means a sex partner with whom sexual contact is established in exchange for material remuneration, meaning that you paid money or gave some other material remuneration to the partner)*

C4. In the past 12 months, have you had oral sex with a man? *(Explain: By oral sexual contact I mean that penis of one person penetrates mouth of another person.)*

Yes	1
No	2 **Go to C7**
No response	**99 Go to C7**

C5. The last time you had oral sex, did you or your partner use a condom?

Yes	1
No	2
Don't remember	3
No response	99

C6. In general, with what frequency did you and your partners use a condom with oral sex during the past 6 months?

Always	1
Often	2
Occasionally	3
Never	4
Don't know	88
No response	99

C7. In the past 12 months, have you had anal sex with a man?*(Explain: By anal sex I mean that* *penis of one person penetrates anus of another person.)*

Yes	1
No	2 **Go to section D**
No response	99 **Go to section D**

C8. The last time you had anal sex; did you and your partner use a condom?

Yes	1
No	2
Don't remember	3
No response	99

C9. In general, with what frequency did you and your partners use a condom during anal sex during the past 12 months?

Always	1
Often	2
Occasionally	3
Never	4
Don't know	88
No response	99

Section D: Sexual history: Regular partners

Interviewer: Check question C3a

IF HAD SEX WITH REGULAR PARTNER DURING PAST 12 MONTHS …. [___] **Continue**

IF HAD NOT SEX WITH REGULAR PARTNER DURING PAST 12 MONTHS [__] **Go to Section E**

D1. The last time you had anal sex with your regular male partner, was a condom used?

Yes	1 **Go to D3**
No	2
Don't remember	3 **Go to D3**
Had no anal contact	4 **Go to D3**
No response	99

D2. Why didn't you use a condom that time? (Do not read the answers)

Did not have	1
Too expensive	2
Partner objected	3
Don't like them	4
Didn't think it was necessary	5
Didn't think of it	6
Other_____	
Don't know	88
No response	99
No response	99

D3. In general, with what frequency did you and your regular male partner use a condom during the past 12 months?

Every time	1
Most times	2
Occasionally	3
Never	4
Don't know	88
No response	99

Section E: Sexual history: Occasional partners

Interviewer: Check question C3b

IF HAD SEX WITH OCCASIONAL PARTNER DURING PAST 12 MONTHS …. [___] **Continue**

IF HAD NOT SEX WITH OCCASIONAL PARTNER DURING PAST 12 MONTHS [__] **Go to Section F**

E1. The last time you had anal sex with occasional male partner, was a condom used?

Yes	1 **Go to E3**
No	2
Don't remember	3 **Go to E3**
Had no anal contact	4 **Go to E3**
No response	99

E2. If no, what was the reason for not using condom? (Do not read the answers)

Did not have	1
Too expensive	2
Partner objected	3
Don't like them	4
Didn't think it was necessary	5
Didn't think of it	6
Other_____	
Don't know	88

E3. In general, with what frequency did you and your occasional male partners use a condom during the past 12 months?

Every time	1
Most times	2
Occasionally	3
Never	4
Don't know	88
No response	99

Section F: Sexual history: Commercial Sex partners

Interviewer: Check question C3c

IF HAD SEX WITH COMMERCIAL PARTNER DURING PAST 12 MONTHS …. [___] **Continue**

IF HAD NOT SEX WITH COMMERCIAL PARTNER DURING PAST 12 MONTHS [__] **Go to Section G**

F1. The last time you had anal sex with commercial male partner with whom sexual contact was established in exchange for material remuneration, meaning that you paid money or gave some other material remuneration to the partner did you use a condom?

Yes	1 **Go to F3**
No	2
Don't remember	3 **Go to F3**
Had no anal contact	4 **Go to F3**
I did not have this kind Of partner	5 **Go to G**
No response	99

F3. In general, with what frequency did you and your commercial male partners use a condom during the past 12 months? (Circle all answers mentioned)

Every time	1
Most times	2
Occasionally	3
Never	4
Don't know	88
No response	99

Section G: Involvement in Commercial Sex

G1. Have you sex with men in exchange of material remuneration? (Explain: By material remuneration I mean either money or some goods, or paying for your flat, etc.)

Yes	1
No	2 **Go to section H**
Don't want to answer	3 **Go to section H**

G2. Over the last 12 months, approximately how often have you had sex with men in exchange of material remuneration?

Everyday	1
Several times a week	2
Once a week	3
2-3 times a month	4
Once a month	5
Once in three months or less	6
Do not know	88
No response	99

G3. Please specify, what kind of material remuneration do you usually get for your service? ***(Multiple answer possible)***

Money	1
Food	2
Apartment/living plce	3
Other (Specify) ----------	
Do not know	88
No response	99

Interviewer: if the respondent does not take money for his service, go to G7.

G4. How much money do you get for your services? ***(Read the listed responses)***

Less than 10 Lari and less	1
10-20 Lari	2
20-50 Lari	3
50 – 100 Lari	4
More than 100 Lari	5
Other ---------- (**Specify)**	
Do not know	88
No response	99

G5. What is your monthly income from this service?

Up to 50 Lari	1
50-100 Lari	2
100-200 Lari	3
200-300 Lari	4
300-500 Lari	5
500-1000 Lari	6
1000 and more	7
Do not know	88
No response	99

G6. Do you have any other source of income besides this business (commercial sex)?

Yes	1
No	2
Do not know	88
No response	99

G7. If yes, over the last 12 months, about how many clients do you have per one working day? ---------- (*the number)*

Do not know	88
No response	99

G8. Do you consider yourself as involved in the sex-business?

Yes	1
No	2 **Go to G10**
Do not know	88 **Go to G10**
No response	99 **Go to G10**

G9. What is the reason of your involvement in the sex-business? (*Don't read; help if needed*)

Earning money	1
I like my occupation and don't want to do anything else	2
I cannot do anything else	3
Other _____(**Specify)**	
Do not know	88
No response	99

G10. Last time when you had sex with a male partner for material remuneration, did you or your partner use a condom?

Yes	1 **Go to section H**
No	2
Do not know	88
No response	99

G11. If no, what was the reason for not using condom?

Did not have	1
Too expensive	2
Partner objected	3
Don't like them	4
Didn't think it was necessary	5
Didn't think of it	6
Other_____	
Don't know	88
No response	99

Section H: Sexual history: Sex with females

H1. Have you ever had sexual intercourse with a woman?

Yes	1
No	2 **Go to section I**
No response	99 **Go to section I**

H2. Have you had sexual intercourse with woman during the past 12 months?

Yes	1
No	2 **Go to section I**
No response	99 **Go to section I**

H3. I would now like to ask you several questions about your sexual partners That you had during the last 12 month.

H3a. How many regular female partners have you had during last 12 month?__ *(Explain: A spouse *or sex partner, with whom the relationship is stable)*

H3b. How many occasional female partners have you had during last 12 month?__ *(Explain: A sex* *partner, for a short period of time, who is not a spouse, a regular partner, or a sex worker)*

H3c. How many commercial female partners have you had during last 12 month?__ *(Explain:* *A sex partner with whom sexual contact is established in exchange for material remuneration, meaning that you paid money or gave some other material remuneration to the partner.**)***

H4. The last time you had sex with female sex partner. Was a condom used?

Yes	1
No	2
Don't remember	3
No response	99

H5. Interviewer: Check question H3a

IF HAD SEX WITH REGULAR FEMALE PARTNER DURING PAST 12 MONTHS …. [___] **Continue**

IF HAD NOT SEX WITH REGULAR FEMALE PARTNER DURING PAST 12 MONTHS [__] **Go to H6**

In general, what frequency did you use a condom with your regular female partners during last 12 months?

Every time	1
Most times	2
Occasionally	3
Never	4
Don't know	88
No response	99

H6. Interviewer: Check question H3b

IF HAD SEX WITH OCCASIONAL FEMALE PARTNER DURING PAST 12 MONTHS …. [___] **Continue**

IF HAD NOT SEX WITH OCCASIONAL FEMALE PARTNER DURING PAST 12 MONTHS [__] **Go to H7**

In general, what frequency did you use a condom with your occasional female partners during last 12 months?

Every time	1
Most times	2
Occasionally	3
Never	4
Don't know	88

H7. Interviewer: Check question H3c

IF HAD SEX WITH COMMERCIAL FEMALE PARTNER DURING PAST 12 MONTHS …. [___] **Continue**

IF HAD NOT SEX WITH COMMERCIAL FEMALE PARTNER DURING PAST 12 MONTHS [__] **Go to H7**

In general, what frequency did you use a condom with your commercial female partners during last 12 months?

Every time	1
Most times	2
Occasionally	3
Never	4
Don't know	88
No response	99

Section I: Group sexual practices

I1. Have you ever had group sex?

Yes	1
No	2 **Go to section J**
Don't know	88 **Go to section** J
No response	99 **Go to section J**

I2. Were those groups only male groups, only female groups or mixed (male and female) groups?

Only males	1
Only females	2
Mixed	3
Don't know	88
No response	99

I3. At the last time you took part in the group sex, did you use a condom?

Yes	1
No	2
Don't know	88
No response	99

Section J: Condoms, lubricants

J1. Do you know of any place or person from which you can obtain condoms?

Yes	1
No	2 **Go to J3**
No response	99

J2. Which places or person do you know where you can obtain condoms?
(Don't read, circle each mentioned answer.)

Shop	1
Pharmacy	2
Market	3
Clinic	4
Bar/guest house/hotel	5
Peer educator	6
Friend	7
"Tanadgoma"	8
Other_____	
Don't know	88
No response	99

J3. During the last 12 months, have you been given condoms by social workers, health cabinets?

Yes	1
No	2
Don't know	88
No response	99

J4. Now I would like to ask you some questions about the use of lubricants during sexual intercourse with men. (Explain: I mean some dope pr grease that is used during sexual intercourse to make it less painful.) **Do you use lubricants during anal intercourse with men?**

NO ANAL SEX WITH MEN	1 Go to section K
Yes	2 **Go to J6**
No	3
Don't know what it is	4 **Go to section K**
Don't know	88
No response	99

J5.Why do not you use a lubricant? ***(Don't read, circle each mentioned answer.)***

Partner objects	1	**Go to J7**
Afraid to use it	2	**Go to J7**
Too expensive	3	**Go to J7**
Can't get it	4	**Go to J7**
Don't like lubricants	5	**Go to J7**
Other_____		**Go to J7**
Don't know	88	**Go to J7**
No response	99	**Go to J7**

J6. How often do you use lubricants?

Every time	1
Most times	2
Occasionally	3
Never	4
Don't know	88
No response	99

J7. Do you know any place or person where you can obtain lubricants?

Yes	1
No	2 **Go to section K**
Don't know	88
No response	99

J8. Which places or persons do you know where you can obtain lubricants? ***(Don't read, circle each mentioned answer.)***

Shop	1
Pharmacy	2
Market	3
Clinic	4
Bar/guest house/hotel	5
Peer educator	6

"Tanadgoma"	7
Friend	8
Other_____	
Don't know	88
No response	99

Section K: Sexually Transmitted Infections

K1. Have you ever heard of diseases that can be transmitted through sexual intercourse (venereal diseases)?

Yes	1
No	2 **Go toK3**
Don't know	88 **Go toK3**
No response	99 **Go toK3**

K2. Can you describe any symptoms of STIs in men? What external signs or symptoms may cause men to suspect they may be infected? - Any other signs?
(Circle all mentioned responses. More than one answer is possible)

Genital discharge	1
Burning pain on urination	2
Genital/anus ulcers/sores	3
Swelling in groin area	4
Other _____	
No response	99

K3. Have you had a genital discharge during the past 12 months?

Yes	1
No	2
Don't know	88
No response	99

K4. Have you had a genital/anus ulcer during the past 12 months?

Yes	1
No	2
Don't know	88
No response	99

K5. Have you ever been tested for STIs? (*More than one answer is possible)*

Yes	1
No	2 **Go toK9**
No response	3 **Go to section L**

K6. If yes, when was the last time you were tested on STIs?

One year ago	1
During the last 12 months	2
During the last 6 months	3
During the last 3 months	4
During the last month	5
Do not remember	6
Other ----------	
No response	99

K7. Why did you decide to be tested? ***(Multiple answer possible)***

For prophylaxis	1
After discovering symptoms	2
Sexual partner had an STI	3
I was asked to	4
Other (Specify)_____	
No response	99

K8. There is no need to disclose your test results to us, but have you enquired about them yourselves?

Yes	1 **Go to section L**
No	2 **Go to section L**
No response	99 **Go to section L**

K9. If you have not been tested, what was the reason for that? (*Multiple answer possible*)

Don't know where to get tested	1
Don't need it – I know I am healthy	2
Have never thought about this	3
Afraid of the result, I prefer not to know	4
It is very expensive	5
Feel shy before the personnel	6
Don't want to meet some acquaintances when I go for testing	7
Don't want someone to know my test results (even medical personnel)	8
Don't trust doctors	9
Other (Specify) _____	

Note: Module L should be filled only for those respondent who have suffered STI symptoms over the last 12 months. (Check question K3, K4). Otherwise go to Section M.

Section L: STI Treatment seeking behaviors

L. What did you do when you had genital or anal release or ulcer/boil last time? ***(Circle one answer for each question)***

Questions	Yes	No	NR
1. Consulted or received a treatment at the state-owned health clinic or hospital?	1	2	9
2. Consulted or received a treatment at a private health clinic or hospital?	1	2	9
3. Consulted or received a treatment at a drugstore?	1	2	9
4. Consulted or received a treatment from a traditional healer or a wise man?	1	2	9
5. Applied self-treatment?	1	2	9
6. Told your sexual partner about your symptoms or STI?	1	2	9

7. Stopped having sex when the symptoms appeared?	1	2	9
8. Did you use the condoms during the symptom period?	1	2	9
9. Other _____	1	2	99

Section M: Knowledge, opinions, and attitudes towards HIV/AIDS

M1. Have you ever heard of HIV or the disease called AIDS? (***Explain:*** HIV is a human immunodeficiency virus which causes AIDS. ***Make sure that the respondent understood what HIV is. You may use additional definitions too***.)

Yes 1
No 2 **Go to section N**
No response 99

M2. There is no need to disclose their names, but do you know anyone who is infected or died of AIDS?

Yes 1
No 2
Don't know 88
No response 99

M3. Please give me your opinion regarding the following:
(Please read out all options and circle the relevant answer.)

Assertions	**Yes**	**No**	**DK**	**NR**
1. One can reduce HIV risk if one properly uses condoms during every sexual contact?	1	2	88	99
2. Can people protect themselves from the HIV virus by avoiding anal sex?	1	2	88	99
3. One can reduce HIV risk if one properly uses condoms during every anal sexual contact?	1	2	88	99
4 One can get HIV as a result of a mosquito bite	1	2	88	99
5. One may protect oneself from HIV by having one uninfected and reliable partner?	1	2	88	99
6. can one get HIV by taking food or drink that contains someone else's saliva?	1	2	88	99
7. Can one be infected with HIV by using a needle/syringe already used by someone else	1	2	88	99
8. Can healthy - looking person have HIV	1	2	88	99
9. Can Person with the blood group 0 get HIV infection?	1	2	88	99
10. Can mother transfer the HIV/AIDS virus to her fetus or baby	1	2	88	99

M4. Is it possible in your community for someone to get a confidential HIV/AIDS test ? By confidential, no one else has access to your HIV test results

Yes 1
No 2

Don't know 88
No response 99

M5. Do you know the place where you can get HIV tested?

Yes 1
No 2
No response 99

M6. There is no need to disclose your test results to us, but have you ever been tested for HIV?

Yes 1
No 2 **Go to M10**
No response 99

M7. When was the last time you were tested for HIV?

Sometime last year 1
Between 1-2 years ago 2
Between 2-4 years ago 3
More than 4 years ago 4
Don't know 88
No response 99

M8. Were you tested voluntary or for HIV or were you required?

Voluntary 1
Required 2
No response 99

M9. There is no need to disclose your test results to us, but have you enquired about them yourselves?

Yes 1
No 2
No response 99

M10. How you evaluate your risk for HIV?

High risk 1
Medium risk 2
Low risk 3
No risk 4
Don't know 88
No response 99

M11. Now please tell me: (Read out the list and circle one answer for each question)

	Yes	No	DK	NR
1 Would you like to have meal with a person who is diseased with HIV/AIDS?	1	2	88	99
2. If your relative man were infected with HIV would you like to take care of him at your place?	1	2	88	99
3. If a student is infected with HIV, but not diseased may he be permitted to continue studying?	1	2	88	99
4. If your relative woman were infected with HIV would you like to take care of her at your place?	1	2	88	99
5. If a teacher is infected, but not diseased with HIV may he be permitted to continue teaching at school?	1	2	88	99
6. If acquainted with you food salesman is infected with	1	2	88	99

HIV, will you buy food from him/her?				
7. If the member of your family were infected with HIV would you like it to keep this in secret?	1	2	88	99

Section N: Violence

N1. During last year Have you became a victim of violence because of your sexual orientation or sexual relations?

Yes 1
No 2 **Go to section O**
Don't know 88 **Go to section O**
No response 99 **Go to section O**

N2. What kind of violence have you experienced? (Multiple answer possible)

Physical (beating, cutting, etc) 1
Verbal (verbal insult) 2
Sexual (rape) 3
Don't want to answer 4
No response 99

N3. Who was the Perpetrator of violence?

Stranger 1
Family member 2
Friend 3
Relative 4
Coworker 5
Other _____(**specify)**
No response 99

Section Q: Exposure to Interventions

Q1. Could you list all sources of information on STI/HIV? (Don't read) Could you remember some other sources of information? (Multiple answer)

TV/Radio 1
Newspapers 2
Friends 3
Clients 4
Family members 5
"Tanadgoma" 6
Internet 7
Other
No response 99
I have never heard anything about STI/HIV 00 **Go to section P**

Q2. What is the most reliable source for you? ***(Multiple answer)***

TV/ 1
Radio 2
Newspapers 3
Internet 4
Special Boolkets 5
Friends, relatives 6
Other homo/Bisexual males 7
NGO
No response 99
Other Please **specify**

Before question Q3, ask questions from the additional forms 1 and 2.

Q3. That is the end of our questionnaire. You have been very helpful. After generalization and statistical analysis of the present study our organization will plan projects that will be beneficial for all. If in several months I need to take another interview from you, would you make yourself available?

Yes	1
No	2
Don't know (we'll see)	88

Interviewer, thank the respondent for cooperation and say good-bye. After the interview make sure you have taken down the respondent's identification data so that the same person is used in the following panels of the study.

Q4. During the interview the respondent was:

Interested	1
Calm	2
Indifferent	3
Agitated	4
Uninterested	5

Time when interview was concluded_____

The questionnaire is kept till completion of the project.

Quality control on the interview was carried out by_____

Position_____

Organization_____